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Morehead State University Undergraduate Catalog 2023-24

Volume 84 | August 2023

This catalog is the official source of information about Morehead State University's academic programs. Its purpose is to guide you in planning a course of study to meet program, department and University requirements. See the index for an outline of the information provided.

The information in this catalog is current at the time of publication. If you are pursuing a degree and remain continuously enrolled in the University (excluding summers), you may complete a program according to the catalog requirements in effect at the time of your original enrollment.

If you are not continuously enrolled in the University and do not complete a bachelor's degree within five years (three years for an associate degree), you may be required to meet the program requirements stipulated in a current catalog.

If you are a transfer student pursuing a bachelor's degree, the time allotted for degree completion under the catalog in effect at the time of your enrollment is based upon your classification at the time of transfer. For example, a sophomore transfer would have four years, a junior three years and a senior two years. If you transfer above the freshman level and you are pursuing an associate degree, you have two years to complete the program under the catalog in effect at the time of your enrollment. The above limitations are based upon continuous enrollment.

Advisors, departments and University offices make every effort to provide current information to students, but it is your responsibility to know the policies, regulations, and degree requirements that affect you.

For more information, contact the Office of the Provost, Morehead State University, 205 Howell-McDowell Administration Building, Morehead, KY 40351, or call 606-783-2002.

Changes

Morehead State University reserves the right to change its academic regulations, policies, fees, and curricula without notice by action of the Kentucky Council on Postsecondary Education and/or the Morehead State University Board of Regents. Material included in this catalog is based on information available at the time of publication. The provisions of this listing do not constitute an expressed or implied contract between Morehead State University and any member of the student body, faculty, or general public. The provisions of this catalog are not to be regarded as an irrevocable contract between the student and the University. The University reserves the right to make and designate the effective date of changes in University policies and other regulations at any time such changes are considered to be desirable or necessary.

Educational Data

In accordance with actions of the General Assembly of the Commonwealth of Kentucky and in cooperation with the Kentucky Council on Postsecondary Education and the Office for Education and Workforce Statistics, Morehead State University makes publicly available its education data at https://moreheadstate.edu/about-msu/leadership/ppe/institutional-research/.

Equal Opportunity

Morehead State University is committed to providing equal educational opportunities to all persons regardless of race, color, national origin, age, religion, sex, sexual orientation, gender identity, gender expression, disabled veterans, recently separated veterans, other protected veterans, and armed forces service medal veterans, or disability in its educational programs, services, activities, employment policies, and admission of students to any program of study. In this regard the University conforms to all the laws, statutes, and regulations concerning equal employment opportunities and affirmative action. This includes: Title VI and Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Executive Orders 11246 and 11375, Equal Pay Act of 1963, Vietnam Era Veterans Readjustment Assistance Act of 1974, Age Discrimination in Employment Act of 1967, Sections 503 and 504 of the Rehabilitation Act of 1973 as amended, Americans with Disabilities Act of 1990 as amended in 2008, and Kentucky Revised Statutes 207.130 to 207.240; Chapter 344 and other applicable statutes. Vocational educational programs at Morehead State University supported by federal funds include industrial education, vocational agriculture, and the associate degree programs in nursing and radiologic sciences. Any inquiries should be addressed to: Affirmative Action Officer, Morehead State University, 301 Howell-McDowell Administration Building, Morehead, KY 40351, 606-783-2097

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The University

Morehead State University (MSU) is a comprehensive public university with robust undergraduate and graduate programs, emerging doctoral programs, and an emphasis on regional engagement. MSU aspires to be the best public regional university in the South through a commitment to academic excellence, student success, building productive partnerships, improving infrastructure, enhancing resources, and improving enrollment and retention.

Accreditations and Memberships

Morehead State University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate, baccalaureate, master and specialist degrees, as well as the Doctor of Education. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, GA 30033-4097 or call 404-679-4501 for questions about the status of Morehead State University. For additional information and a list of accreditations and memberships, visit https://moreheadstate.edu/about-msu/leadership/ppe/accreditation/.

SOAR: MSU Vision and Strategic Plan

University Vision, Mission and Core Values

University Vision

We aspire to be the best public regional university in the South.

Mission Statement

As a community of lifelong learners, we will:

- Educate students for success in a global environment;
- Engage in scholarship;
- Promote diversity of people and ideas;
- Foster innovation, collaboration and creative thinking; and
- Serve our communities to improve the quality of life.

Core Values

We strive to exemplify these core values in all that we do:

- PEOPLE come first and are treated with dignity and respect;
- LIFELONG LEARNING, SCHOLARSHIP and SERVICE;
- DIVERSITY and INCLUSION of people and thought;
- EXCELLENCE, HONESTY, INTEGRITY, and TRUST.

Student Success

Morehead State University will support student success by investing in and providing experiences that enrich academic, co-curricular, and career goals in order to prepare students for a diverse and ever-changing world.

Goal 1

Recruit - To recruit a diverse and engaged population of students

Strategies:

1. Expand recruitment pipelines and strengthen connections for under-represented minority populations.
2. Use predictive analytics to identify and guide student recruitment practices.
3. Expand and identify additional resources for advising and support for all transfer students.
4. Expand involvement of, set accountability standards for, and reward excellence by faculty and staff in the student recruitment process.
5. Enhance orientation initiatives.

Goal 2

Retention/Persistence and Degree Completion - To support the overall success and retention of a diverse student body

Strategies:

1. Provide support structures from recruitment to degree completion focused on underrepresented minority students.
2. Use predictive analytics to proactively identify “at-risk” students to aid in retention.
3. Evaluate the effectiveness of and provide sustained support for services and courses provided to underprepared students in English and math.
4. Utilize comprehensive tools that focus on student success by providing the opportunity for coordinated case management.
5. Implement High Impact Learning Practices (internships/practicums, clinical experiences, student research projects, study abroad, service learning, mentorships) with a goal of all undergraduate students participating in at least one High Impact activity.
6. Provide opportunities for career exploration and planning with a means for students to illustrate academic, engagement and leadership experiences throughout the educational career.
7. Create a first-year experience that includes meaningful academic experiences, cohort-building, leadership and civic opportunities, diversity training, career planning and financial literacy.
8. Expand peer mentoring/coaching groups to increase student success.
9. Evaluate and improve the student employment experiences to ensure meaningful work/career experiences.
10. Provide intentional/intrusive advising for all first-year, sophomore and other key student populations.
11. Develop a campus wide training model for advising (both professional and faculty advising) for all colleges.
12. Create and implement a Sophomore Experience.
13. Improve the process for identifying students who are near degree completion with financial need, distributing funds and monitoring progress of students who receive them.
14. Expand and invest in mental health support services for students.
15. Develop a model to help students navigate and assist with campus-wide communication of University policies, procedures and appropriate contacts.
16. Allocate adequate resources, both financial and personnel, to provide co-curricular experiences outside of the classroom to include campus life, the arts and diversity/multicultural events.
17. Create a communication plan that incorporates campus-wide usage of an interactive calendar.

Academic Excellence

Morehead State University will enhance academic excellence through the scholarship and active mentorship of a well-rewarded, diverse, and

dedicated faculty and staff that employ innovative, high-quality academic programs and services to engage students in the culture of experiential, life-long learning, citizenship and achievement.

Goal 1

Recruit, retain, and support an outstanding and diverse faculty and staff

Strategies:

1. Place a priority on addressing faculty shortages in academic programs.
2. Offer nationally competitive faculty and staff compensation packages.
3. Increase departmental recurring funding for faculty development activities.
4. Create a centralized unit that provides resources to support faculty teaching and research.
5. Increase tenured and tenure-track faculty diversity through intentional recruiting approaches/practices.
6. Recruit, retain, and reward well-qualified faculty and staff with inclusive and diverse mindsets in thought and practice with a strong affinity for interacting with students.
7. Authorize and provide the necessary resources for Academic Affairs to conduct and manage faculty hiring processes.
8. Review and improve the onboarding training plan for faculty and staff.

Goal 2

Offer innovative, high-quality, effectively delivered academic programs that attract and retain students and promote academic success

Strategies:

1. Offer courses that are of high quality, grounded in theory, and delivered with excellent pedagogy.
2. Develop more extensive on-campus summer programming that might include programs such as requiring underprepared students to attend the Summer Success Academy.
3. Enhance the Honors Program.
4. Evaluate current academic program offerings - maintain programs that are consistent with MSU's mission, grow high-quality programs and develop new programs that produce successful graduates.
5. Retain and provide funding for current accreditations and attainment of new accreditations.
6. Develop and maintain a cohesive General Education program.
7. Increase the number and quality of programs and courses delivered online.
8. Enhance the learning experience for online students, developing an engaging university experience for online students and ensuring that online faculty have proper resources and support.
9. Develop a robust course scheduling approach that integrates multiple terms and sessions.

Goal 3

Provide coordination for high-quality, high-impact, co-curricular and experiential learning opportunities as a distinctive feature of students' learning experience

Strategies:

1. Create a center for high-impact learning.
2. Evaluate the possibility of providing University-wide academic credit for high-impact experiences.
3. Develop a robust system to track student participation in all high-impact practices.
4. Ensure that faculty are rewarded with workload credit for participation in high-impact activities.
5. Ensure that departments/colleges are granted latitude in creating high-impact activities.

Goal 4

Enhance physical learning environments, core instructional infrastructure, and faculty teaching capacity

Strategies:

1. Create and maintain high-quality learning spaces for all academic programs.
2. Provide and maintain high-quality IT infrastructure and support for academic programs.

Goal 5

Foster a culture of research, scholarship and creative activity that supports and rewards faculty involvement and engages students and external partners

Strategies:

1. Develop a process to document, recognize, and disseminate faculty scholarship, research and creative activities, especially scholarly activities with students.
2. Enhance support for faculty research/creative capacity and output.
3. Increase engagement of staff in research activity by maximizing staff and related personnel supported by grant money.
4. Encourage cross-collaboration of faculty and staff in research endeavors through identifying existing space for interaction.
5. Ensure scholarly activity is valued through the development of uniform faculty evaluation plans.
6. Incentivize faculty scholarship by revising the indirect distribution formula to return research funds to the research accounts of the faculty members who generated those funds.

Rankings, Reputations and Regional Responsiveness

Morehead State University will engage in productive relationships with constituents in order to enhance the reputation of the University, improve the way we are ranked compared to benchmark peers, increase the private support we provide to our students and strengthen our efforts toward serving our state-defined region.

Goal 1

Enhance the promotion of MSU as a highly respected university for learning and working, and continue to cultivate our reputation of excellence

Strategies:

1. Clearly identify and communicate MSU's distinctive attributes to attract students, donors, faculty, staff and industry partners.
2. Highlight notable/successful alumni to promote MSU's distinctiveness.
3. Analyze and implement best practices to ensure our most effective digital presence including social media platforms and the external website.

Goal 2

Strengthen student success by cultivating increased private financial support for scholarships, experiential education, learning spaces, awards and fellowships

Strategies:

1. Conduct a comprehensive campaign focused on raising funds for student scholarships.
2. Strategically involve academic departments and faculty in fundraising efforts to enhance the quality of learning spaces throughout the campus.

3. Assess resources and staffing devoted to marketing and fundraising and strengthen where necessary in accordance to benchmark institutions.

Goal 3

Provide strategic engagement and service to address regional needs through strengthened and expanded partnerships

Strategies:

1. Coordinate and focus initiatives to support regional outreach.
2. Identify and support economic development opportunities to improve the standard of living in Eastern Kentucky.
3. Identify and address the educational needs of our service region.

Goal 4

Elevate our rankings in select national publications

Strategies:

1. Direct resources to campus units whose continuous improvement impact our rankings.
2. Increase alumni giving as a way to improve rankings.
3. Allocate support and resources to promote MSU's reputation (internally and among peer institutions) in academic excellence and student success.

Outcomes (Performance-Based Funding)

Morehead State University will strengthen its financial position through alignment with the state's performance-based funding model supported by strategic resource reallocation decisions and overall sound fiscal management.

Goal 1

Direct resources in support of high potential return Outcomes-Based Components of Performance-Based Funding Model

Strategies:

1. Increase support for "high-impact learning" practices to increase retention and progression rates.
2. Evaluate models to increase graduate enrollment including differential tuition pricing models and enhanced graduate assistant packages.
3. Support innovative course scheduling and program delivery models, which could enhance progression.
4. Invest in record-keeping technologies and processes needed to provide current and accurate information related to performance funding model metrics.

Goal 2

Optimize facilities footprint

Strategies:

1. Confirm that all MSU square footage is being coded correctly and explore space reallocation to maximize potential under the performance-based funding model.
2. Update the campus master plan based on a cost-benefit analysis of all University properties and programs.
3. Explore ways to generate new revenue with existing square footage through a more efficient utilization of space – including during offline periods.

Goal 3

Increase targeted investment in instruction and student support services

Strategies:

1. Invest in comprehensive advising tools focused on student success.
2. Explore models for fractionalized workloads for staff to utilize expertise and to optimize funding based on direct instructional costs in the performance funding model.
3. Increase investment in targeted retention programs for under-represented minority students.

Goal 4

Increase enrollment through targeted recruitment programs

Strategies:

1. Increase the number of transfer students from KCTCS through an expansion of articulation/transfer agreements.
2. Increase the MSU matriculation of students participating in the Eagle Scholars program through more frequent and planned contact with the University faculty/staff.
3. Optimize the University's student scholarship program to enhance enrollment including that of out-of-state and international students.
4. Increase investment in merit-based scholarships for deserving Craft Academy, Governor's Scholars, Governors School for the Arts, Governors School for Entrepreneurs, and other gifted student high school program participants, specifically targeting those students who have attended programs at MSU.
5. Competitively position the University among regional comprehensive universities with respect to cost of attendance.

Goal 5

Reallocate resources in support of the core University mission

Strategies:

1. Reallocate resources to support the "direct cost of educating students" category of the performance funding model by increasing the amount spent on actual instruction and seeking efficiencies in support areas not primarily designed to enroll students or track their academic progress.
2. Develop and apply a consistent process for assessing the University's portfolio of degree programs to ensure both relevance and financial viability.
3. Incentivize development of revenue-generating programs.
4. Evaluate and develop alternatives to effectively manage the University's rising pension costs.

Campus Map and Buildings

Visit www.moreheadstate.edu/campusmap for a complete listing of campus buildings and accessibility information.

Kentucky Center for Education and Workforce Statistics

Postsecondary Feedback Reports

The Postsecondary Feedback Reports take a deep look into what happens to Kentucky graduates after they leave college. Each report provides in-depth data by institution about which degrees are pursued, the employment of graduates, as well as information about students who go on to pursue advanced degrees, average wages for various degree categories and some insights into what happens to students who leave without a credential and do not continue their education elsewhere. Reports are created for each of the commonwealth's public four-year, public two-year and independent institutions.

To view the most recent Postsecondary Feedback Report, visit the KCEWS website at https://kcews.ky.gov/Reports/Files.

Admission and Residency

Admission

The admission of all undergraduate students to Morehead State University is administered by the authority of Undergraduate Admissions in the Office of Enrollment Services, which reflects and works within the context of the mission statement of the University and within appropriate state and federal guidelines and policies.

All applicants for admission are required to complete the Undergraduate Admission and Scholarship Application and provide evidence of their prior educational experience and other supporting data for evaluation. The Office of Enrollment Services may request clarification of submitted documents and retains all documents as part of the student's permanent record. The University reserves the right to deny admission (or to admit with certain restrictions) based on an evaluation of the student's supporting data, or conduct that is unacceptable for the unrestricted admission into the University. The Undergraduate Admission and Scholarship Application requires applicants to report all criminal convictions, other than minor traffic violations. To assess the suitability of such applicants to the University community and identify any special conditions for enrollment, the University has established a review process. Copies of the Review Process for Undergraduate Admission Applicants with Reported Criminal Convictions are available upon request in the Office of Enrollment Services. Preliminary admission decisions made by the office prior to receipt of all official and final documentation are temporary and are subject to change.

Students who do not meet the requirements for admission to either four-year or two-year degree programs may appeal for special consideration when past academic performance may not be indicative of the ability to do college-level work or when there may be errors in supporting documentation. Guidelines for the appeals procedure are available.

Requests for applications or questions concerning admission should be directed to Undergraduate Admissions, Office of Enrollment Services, Morehead State University, Morehead, KY 40351, by phone at 606-783-2000, 1-800-585-6781, by fax to 606-783-5038 or online at www.moreheadstate.edu/admissions or email admissions@moreheadstate.edu. Students are encouraged to visit the campus to discuss intended programs of study. Campus visits can be scheduled online at www.moreheadstate.edu/visit.

Completion of admission requirements generally allows students to enroll in any program at Morehead State University. However, programs such as nursing, imaging sciences, veterinary technology and teacher education require additional criteria and procedures. Students wishing to pursue studies in these programs must submit appropriate application materials to each program separate from those required by Undergraduate Admissions. For additional information, consult with appropriate sections of the catalog or contact Undergraduate Admissions in Enrollment Services.

Requirements for admission for high school graduates, GED recipients, transfer students, returning students, international students, home-schooled students, special students and students auditing courses are detailed within this section.

Admission Pathways

Admission Criteria for High School Graduates (2022-23)

Students who are graduates of an accredited high school will be admitted into a pathway of admission as determined below. High school graduates must also meet the pre-college curriculum (PCC) requirements established by the Kentucky Council on Postsecondary Education (for Kentucky residents). All applicants for four-year degree programs who do not meet the PCC requirements must satisfy those requirements within their first 24 hours. Removal of PCC deficiencies will be monitored by the Office of the Registrar. Associate degree applicants do not need to meet PCC requirements for admission but their PCC requirements will be assessed and removed.

To apply for admission, submit to Undergraduate Admissions in the Office of Enrollment Services: (1) a completed Undergraduate Admission and Scholarship Application; (2) a high school transcript (and a final transcript after high school graduation); and (3) a one-time $30 undergraduate application processing fee.

Pathways

1. Unconditional Admission (Bachelor’s Degree): Unweighted High School GPA of 2.50 – 4.00
2. Conditional Admission (Bachelor’s Degree): Unweighted High School GPA of 2.00 – 2.49
   a. Plus, a signed and approved Learning Contract.
   b. Participation in Eagle Success Program.
   c. Admitted to Conditional Admission 1 Associate of Arts / US.COND1.AA
3. Denied Admission: High School GPA below 2.00 (Unweighted). Students may appeal.
4. Provisional Admission (Bachelor’s Degree): Unweighted High School GPA of 2.00 – 2.49
   Only used in cases of:
   a. International Admits.
   b. Athletes meeting NCAA qualifiers as determined by the Director of Athletics Compliance. Unless exempted, applicants who do not meet the Kentucky Pre-College Curriculum (PCC) must successfully satisfy the PCC within their first 24 credit hours. Undergraduate Admissions may admit students when special circumstances exist and where students can demonstrate their ability to matriculate at MSU.

GED Recipients

To apply for admission, submit to the Office of Enrollment Services: (1) a completed Undergraduate Admissions and Scholarship Application; (2) a GED transcript; and (3) a one-time $30 undergraduate application processing fee.

Admission as a Transfer Student

Morehead State University welcomes transfer students and offers services to facilitate the transfer to MSU.

Students are eligible for unconditional admission as a transfer student if their GPA is 2.0 or better on a 4.0 scale on at least 24 credit hours of college work, and they are in good standing at all previously attended institutions.

Applicants for transfer admission to four-year degree programs who did not complete the Kentucky Pre-College Curriculum (PCC) and who have completed fewer than 24 credit hours must take specified courses to remove PCC deficiencies. Removal of PCC deficiencies will be monitored by the Office of the Registrar. Students who have earned fewer than 24 credit

hours must submit high school and college transcripts to facilitate appropriate advising and placement.

Students with a GPA lower than 2.0 on a 4.0 scale may be considered for probationary admission. Transfer students admitted on probation will be monitored and will be expected to earn a 2.0 GPA at MSU during the first semester of attendance. Students who do not earn the 2.0 GPA will be subject to academic dismissal. Students academically dismissed have the right to appeal.

Transfer students who apply for admission with fewer than 24 credit hours will be admitted subject to the same admission criteria as that of an entering freshman. In addition, any previous college work will be given consideration in the admission process, and any student with a GPA lower than 2.0 on a 4.0 scale may be considered for probationary admission.

To be admitted as a transfer student from other colleges and universities, students are required to submit to the Office of Enrollment Services: (1) a completed Undergraduate Admission and Scholarship Application; (2) transcript(s) from all school(s) previously attended; and (3) a one-time $30 undergraduate application processing fee.

Baccalaureate Program Transfer Frameworks

Morehead State University fully supports the *Block Transfer of Academic Credit Policies* as defined by the Kentucky Council on Postsecondary Education. Transfer students bringing block course certification to the University from other Kentucky public institutions can be assured that these certifications will be honored. Questions pertaining to the *Block Transfer of Academic Credit Policies* should be directed to the Office of the Registrar, Morehead State University, 201 Ginger Hall, Morehead, KY 40351. For more information, call 606-783-2008, email registrar@moreheadstate.edu or visit https://moreheadstate.edu/academics/academic-affairs/registrar/.

Transfer of Credits from Regionally Accredited Colleges

Upon receipt of an official transcript sent directly to MSU from the transfer institution, credit earned from regionally accredited colleges will be posted to the MSU transcript as transfer credit. Courses in which the grade is lower than "C" may not be transferred for credit in certain majors or areas. Students should consult their academic advisor. **Transfer credit does not compute in the MSU GPA**.

For additional information regarding transfer credit and transfer credit appeals (UAR 132), visit https://moreheadstate.edu/about-msu/leadership/policies/uar.

Transfer of Credits from Non-Regionally Accredited Colleges

All transfer credit from non-regionally accredited Colleges will be individually evaluated by the Dean of the College in which the student is seeking a degree. Transfer credit will be granted only when:

1. The student has completed a minimum of 12 semester hours at Morehead State University and achieved a minimum GPA of 2.0.
2. The course being transferred corresponds to one offered in the Morehead State University Undergraduate Catalog in effect at the time the transfer is sought.
3. The student has earned a grade of "C" or higher in the course for which transfer credit is being sought.
4. The course was taught by an instructor whose academic credentials meet the Commission on Colleges (SACS) requirements (e.g., generally, at least the Master degree in the teaching field with 18 graduate hours in the teaching field). Credit for transfer which was earned more than 10 years before transfer is sought may not be applicable to current degree or licensure requirements. For a review, see the dean of the college in which the transfer is sought.

For more detailed information regarding the transfer policy for both regionally and non-regionally accredited colleges, visit UAR 100 at https://moreheadstate.edu/about-msu/leadership/policies/uar.

Admission as a Returning Student

Students who discontinue enrollment at MSU for one semester (excluding summer and winter terms) must submit a completed Undergraduate Admission and Scholarship Application, along with a one-time undergraduate application processing fee of $30 if the fee has not been paid previously, to be readmitted to the University.

Students who have attended another institution since they last attended MSU must submit: (1) a completed Undergraduate Admission and Scholarship Application, (2) an official transcript from all institutions attended, and (3) the one-time undergraduate application processing fee of $30 if not paid previously.

Consideration for admission will also include the applicant's prior academic work and academic standing at MSU, as well as the academic records and documented behavior/suspension from any other college or university attended. Students with less than a 2.0 GPA from previous coursework at MSU will be required to appeal for admission.

Admission as an International Student

To be admitted, international students must submit to Undergraduate Admissions in the Office of Enrollment Services: (1) the Undergraduate Admissions and Scholarship Application; (2) official high school transcript with an English translation when applicable; (3) evidence of proficiency in the English language as demonstrated by a minimum score of 500 (or 61 on the new system) on the Test of English as a Foreign Language (TOEFL), a minimum score of 5.0 on the IELTS, a minimum score of 82 on the Michigan Test of English Language Proficiency, sufficient ACT or SAT scores, or have completed at least 24 hours from a college or university in the United States; (4) official verification of financial resources; and (5) a one-time $30 undergraduate application processing fee. ACT or SAT scores are required for international students graduating from a U.S. high school. International students who submit ACT or SAT scores will have their scores reviewed to determine admissibility. International students should apply at least four months before the semester or term of enrollment.

To assist in the proper placement of students in the areas of English, mathematics, science and social studies, all entering international students will have a hold placed on their account which will prevent course registration.

In order to have the course registration hold lifted:

1. Applicants with ACT or SAT test must have scores that meet the subject area minimum requirements found at https://moreheadstate.edu/academics/testing/2022-23-placement-testing.
2. Applicants who have not taken the ACT or SAT test or those who have scores but have scored below the minimum required in the subject areas will take placement tests to determine the classes for which they should enroll. Entering transfer students may be asked to take the appropriate placement test to ensure proper course placement. For further information about placement testing please contact University Assessment and Testing, 606-783-2526 or testingcenter@moreheadstate.edu.

Students transferring to the University, must submit: (1) the Undergraduate Admissions and Scholarship Application; (2) all official transcripts from institutions from which they are transferring; (3) official verification of financial resources; and (4) a one-time $30 undergraduate application processing fee; (5) depending on your particular situation, you may be asked to provide additional documentation. Students transferring

to the university from an institution of higher education in the United States, must submit the Morehead State University transfer form available from the Office of International Student Services.

International transfer students with fewer than 24 attempted credit hours will be subject to the same admission criteria as that of an entering international freshman. In addition, any previous college work will be given consideration in the admission process, and any student with a GPA lower than 2.0 on a 4.0 scale will be denied admission. Federal regulations prohibit the issuance of a Form I-20 based on conditional admission. Since students who are admitted on appeal are conditionally admitted, international students cannot appeal an admission denial.

Transfer of Credits

Students seeking transfer credit from an international college or university should have that institution send an official transcript to Morehead State University. In addition, the student should have his or her transcript officially evaluated by the World Education Services (WES), and have a copy of the official evaluation sent from WES to Morehead State University. It is the student's responsibility to contact WES and pay all service fees associated with such transactions.

Pre-College Curriculum Requirements

SUBJECT	CREDITS	COURSES
Language Arts	4	Same as minimum high school graduation requirements
Social Studies	3	Same as minimum high school graduation requirements
Mathematics	3	Same as minimum high school graduation requirements
Science	3	Same as minimum high school graduation requirements
Health	½	Same as minimum high school graduation requirements
Physical Education	½	Same as minimum high school graduation requirements
Visual & Performing Arts	1	Same as minimum high school graduation requirements
World Language	2	Two units of a single language or demonstration of a world language proficiency
Electives	7	Same as minimum high school graduation requirements
Technology	0	Same as minimum high school graduation requirements
TOTAL:	**24**	

Exceptions to the Pre-College Curriculum

The following shall be exempted from the requirements of the Kentucky Pre-College Curriculum:

1. Students who are 21 years of age or older at time of application.
2. Students entering baccalaureate degree status with 24 or more credit hours applicable to a baccalaureate degree with a GPA of at least 2.0 on a 4.0 scale.
3. Students who meet the ACT or SAT exemption scores in a subject.
4. Active duty military personnel, their spouses, and their dependents.
5. A student enrolled in an associate degree program.
6. Out-of-state students.
7. International students.

The above is subject to approval by the Kentucky Council on Postsecondary Education.

Admission as a Special Student

Non-degree seeking (Special) status allows access to academic courses for students desiring to continue their education without seeking a degree. To apply for admission, submit a completed Undergraduate Admission and Scholarship application along with the one-time $30 undergraduate application processing fee. Non-degree seeking students are not eligible for financial assistance including federal or state financial aid or institutional scholarships.

Non-degree status students who wish to enroll in a degree-seeking program must complete a new application for admission for the term in which they are seeking to change their status. No more than 24 hours of coursework completed by as a special student may be used to fulfill degree requirements. Students interested in moving into a degree seeking status will fall into one of two categories:

1. Those who have earned fewer than 24 semester credit hours at MSU must meet the admissions standards for first-time freshman.
2. Those who have earned 24 semester hours will be considered as a transfer or returning student and be subject to admission standards for the appropriate category. Returning students must provide a final high school transcript.

Admission as an Auditor

Students who wish to audit a class need only submit to Undergraduate Admissions a completed Undergraduate Admission and Scholarship Application and a one-time $30 undergraduate application processing fee. Although credit cannot be given for courses audited, such courses are recorded on the transcript. Tuition and fees are the same for auditing a course as they are for taking a course for credit.

Admission as a Visiting Student

Students currently attending another institution of higher education who wish to take coursework at MSU to complete degree requirements may be eligible for admission as a visiting student. To apply for admission, submit the following: (1) the completed Undergraduate Admission and Scholarship Application; (2) the Visiting Student Recommendation Form (completed by student's primary institution); and (3) a one-time $30 undergraduate application processing fee.

Admission as a High School Student

Students currently enrolled in high school may be eligible for the MSU Eagle Scholars program. This program allows qualified high school students to take MSU college courses at their high school or an MSU campus. The Eagle Scholars program has partnered with high schools, area technology centers and various educational foundations to provide this opportunity. A student must submit an Eagle Scholars application to the Office of the Registrar, 201 Ginger Hall, Morehead, KY 40351.

The application must include the student's high school transcript. Students must have a minimum high school GPA of 3.0 to be admitted unconditionally to the Eagle Scholars program. High school GPA will be used for academic advising and appropriate placement in coursework.

Any exception to the requirements must have the approval of the Eagle Scholars program. Direct any questions to the Eagle Scholars office at 606-783-2995 or ecp@moreheadstate.edu or to your high school guidance counselor.

Graduates of Noncertified, Nonpublic Schools

(Including homeschools)

Students who are graduates of noncertified, nonpublic schools, including homeschooled students, must submit to Undergraduate Admissions in the Office of Enrollment Services (1) an Undergraduate Admission and Scholarship Application, (2) official transcript, (3) a one-time $30

undergraduate application processing fee and (4) ACT or SAT scores. Morehead State University recognizes a parent-issued transcript if the student received it for completing a program of education through high school at home. The homeschool transcript must reflect the courses taken, date of each term, credits obtained, and grades earned in each course attempted. In addition, the transcript must have a signature/seal of the person in charge of the homeschool transcripts (for example, the parent/school administrator) and the transcript must be notarized. Transcripts are also required from other institutions or private programs in which a student has earned credits toward their high school diploma. In some cases, a review of the student's courses may be required. Admission will be considered according to the same procedures as applicants from accredited high schools.

Dual Admission

Students at participating Kentucky community and technical colleges can be admitted to Morehead State University while attending the community and technical college. Students need to only apply for admission once. Interested students may contact the admission office at the community college and request that their admissions information be forwarded to Undergraduate Admissions in the Office of Enrollment Services at Morehead State University. Participating students are assigned an academic advisor at the University. Students will be locked into a catalog year for an academic program, subject to changes in program requirements. MSU cannot be responsible for guaranteed transferability when curricular changes are made by agencies outside the University. Students must have a minimum 2.0 GPA and at least 24 credit hours of transferable credit or they may be subject to the Kentucky Pre-College Curriculum. Students who do not meet the above criteria will be considered on an individual basis. Also, students may need to take the ACT for admission to certain programs at the University. Participating community colleges include Ashland Community and Technical College, Big Sandy Community and Technical College, Bluegrass Community and Technical College, Hazard Community and Technical College, Maysville Community and Technical College, South Central Kentucky Community and Technical College and Southeast Community and Technical College.

For more information, contact Enrollment Services at 606-783-2000 at MSU or the admissions offices at the participating community and technical colleges.

Residency

Classification of Residence for Admission and Tuition Assessment Purposes

Residency for Fee Assessment Purposes

The Council on Postsecondary Education for the Commonwealth of Kentucky, in accordance with Section 164.020(8) of the Kentucky Revised Statutes, has adopted the policy by which residency for fee assessment purposes is defined and determined. The policy is applied to determine a student's eligibility for fees assessed to Kentucky residents who enroll at any state-supported institution of higher learning in the Commonwealth of Kentucky. This determination is made at the initial time of enrollment. Every student who is not a resident of Kentucky as defined by the policy enacted by the Council on Postsecondary Education is required to pay nonresident registration and/or entrance fees.

Any student or prospective student in doubt concerning his or her residency status must bear the responsibility for securing a ruling by completing a residency application and returning it to the Office of Enrollment Services. The application and policy are available at https://moreheadstate.edu/admissions/whats-next/ and the petition must be notarized.

Procedure for Determination of Student Residency Status for Fee Assessment Purposes

To apply for a change of residency for tuition purposes, a student must complete the residency application and submit it, along with supporting documentation, to the Office of Enrollment Services at least 30 days before the term begins. The student will be notified of the residency status decision in writing. If the student wishes to appeal the decision, he or she may do so by requesting an appeal in writing, within 14 days of the decision, with the University's Residency Review Committee. If the student wishes to appeal the decision of the Residency Review Committee, he or she may do so by requesting in writing that a copy of his or her file be submitted to the president of the Council on Postsecondary Education for referral to the Council's Committee on Residency Review. Additional information in regard to the residency for tuition purposes may be directed to the Office of Enrollment Services, 606-783-2000, 800-585-6781 or admissions@moreheadstate.edu.

Enrollment Fee

The $75 enrollment fee applies to all newly matriculating, first-year undergraduate students, i.e., first-time freshmen, newly matriculating transfer students and new international students. Payment of the fee confirms the student’s intention to attend and activates next steps for smooth onboarding to MSU, incentivizes completion of pre-enrollment orientation and advising, and rewards students for engaging in those pre-enrollment services designed to aid academic success supporting their transition to MSU.

Student Affairs

Disability Services

Assistance for students with physical and/or mental disabilities is available through the Office of Disability Services in accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act. Requested accommodations should relate to a functional limitation experienced as a student at the University. If accommodations are approved, they will be provided at no charge. To qualify the student will need to submit documentation of a disability from an appropriate professional and confidentially discuss their needs with the Assistant Director for Student Services (Disability Services). While the student may pursue these services at any time, earlier contact may be in their best interests since some accommodations take longer to arrange and are not applied retroactively. For more information or to schedule an intake session, call 606-783-5188 or visit https://moreheadstate.edu/student-support/disability-services/.

First Year Programs

The Office of First Year Programs offers a variety of academic support programs to help students be successful at Morehead State University. For additional information, visit https://moreheadstate.edu/student-support/first-year-programs/ or call 606-783-2517.

Student Orientation, Advising and Registration (SOAR)

SOAR is a one-day overview of the educational opportunities and services at MSU. New students will learn more about MSU, register for classes and meet other students, faculty and staff. Students will also meet with academic advisors. New freshmen or transfer students enrolling for the fall semester are encouraged to participate in the Student Orientation, Advising and Registration (SOAR) program. SOAR is offered in April through July.

New Student Days

New Student Days provides fun and educational activities for new students the weekend before classes begin. All new freshmen are required to attend New Student Days. Students are notified of the specific dates and times of these activities in July by the Office of First Year Programs.

Student Eagle Diversity Center

The Student Eagle Diversity Center (SEDC) is dedicated to developing and sustaining an academic, social and cultural environment that embraces and supports diverse student populations. We strive to consistently generate and facilitate activities and programming that challenge, support, and contribute to the continued development and success of students of color. Focused on the experience of students of color at MSU, SEDC coordinates an array of educational, cultural and social programs, collaborating with faculty, staff, academic departments, and campus organizations to encourage and stimulate positive social interaction, cultural and community awareness.

SEDC is inclusive to all members of the University community and provides focus towards African-American, Latino and Hispanic students. We have developed a student-focused, comprehensive educational experience to nurture an inclusive community on campus. We provide support to prospective and enrolled students of color, expanding opportunities for student engagement, leadership and scholarship. For more information, contact the Minority Academic Services Coordinator at 606-783-9051 or visit https://moreheadstate.edu/student-support/eagle-diversity-education-center/.

Housing

The Office of Student Housing offers positive life experiences through community involvement, leadership opportunities, educational programming, and service to others. All students under the age of 21 who have yet to complete four semesters in residence are required to live on campus. Those students commuting from the permanent home address of their parent/guardian located within 50 driving miles of the main campus or who have other specific life circumstances may file a housing/dining waiver with the Office of Student Housing in order to be exempt from this requirement. If approved, the student will be permitted to commute and not be responsible for residential housing/dining fees.

Application for on-campus student housing is completed online via the MyMoreheadState portal after completion of enrollment deposit. After a housing application and housing deposit is completed, students should wait for information to their MSU email regarding room selection. A room selection time will be awarded based on the date and time of the completed application. Therefore, students are encouraged to apply as early as possible. Students that need living accommodations during University breaks must reside in designated break housing.

For current fee information, application instructions, and to access the On-Campus Residency Policy, please visit https://moreheadstate.edu/student-life/housing/ or contact the Office of Student Housing via e-mail (housing@moreheadstate.edu) or via telephone (606-783-2060).

Vehicle Registration

A valid Morehead State University parking permit is required for any motor vehicle or motorcycle operated on the campus. Registration and fee information is available from the Traffic Office of the MSU Police Department, 100 Laughlin Health Building, 606-783-2035 or at www.moreheadstate.edu/police.

Student Activities

The Student Activities office is dedicated to delivering high-impact services and quality programs to enhance the collegiate experience and support holistic development. The office provides management and oversight for Registered Student Organizations (RSO's), Fraternity and Sorority Life, and campus activities utilizing a student Campus Activities Board (CAB). We offer numerous student events each week and all our CAB events are free to students. For more information visit https://moreheadstate.edu/student-life/activities/cab/.

Student Organizations (RSO's)

Morehead State currently offers over 100 RSO's ranging from departmental, governance, religious, honorary, residence hall, service, e-sports, fraternities and sororities, and special interests. All our RSO's are created and led by students. Joining an organization is a great opportunity to make a difference, meet peers, and enhance your leadership skills. For more information contact the Office of Student Activities at 606-783-2071 or visit https://moreheadstate.edu/student-life/activities/.

Fraternity and Sorority Life

Morehead State is home to a vibrant fraternity and sorority community comprised of three governing councils: Interfraternity Council, National Pan-Hellenic Council (NPHC), and Panhellenic Council. We have a dozen values-based, active chapters focused on scholarship, service, leadership, and community. For more information call 606-783-2668 or visit https://moreheadstate.edu/student-life/activities/fraternity-sorority-life/.

Campus Recreation and Wellness

The Department of Recreation and Wellness (RECW) offers access to a variety of recreational facilities and co-curricular programs to students, faculty, staff, and the Morehead community. The department promotes wellbeing by encouraging the development of lifelong skills through health education, fitness programs, intramural sports, and aquatic activities. RECW manages the Recreation and Wellness Center, which includes:

- Full line of cardio and weight equipment
- Indoor Track
- Racquetball/squash courts
- Bouldering Wall
- Group Exercise/Fitness
- Pool with vortex
- Multipurpose gymnasium
- Outdoor Rental Center
- Locker Rooms

For more information call 606-783-2083 or visit https://recreation.moreheadstate.edu.

Student Services

Tuition and Fee Information

Office of Accounting & Financial Services
207 Howell McDowell
Morehead, KY 40351
Phone: 606-783-2019/Fax: 606-783-5011
billing@moreheadstate.edu

Financial Responsibility Agreement

When a student registers for classes, they create a financial obligation to Morehead State University. The total semester charges (tuition, housing, meal plans, books and fees) less financial aid, scholarships, waivers, and third-party payments received for each semester result in the amount due to the University.

All students must accept a Financial Responsibility Agreement each semester and pay their balance in full or enroll in a payment plan to activate their meal plan and BeakerBucks, to allow textbook charges at the University Store, and to prevent cancellation of their class schedule.

1. Accept your Financial Responsibility Agreement each semester.
2. Pay your account in full or enroll in a payment plan (1/3 down payment required) if you have a balance due. Review the academic calendar for due dates. It is available at https://moreheadstate.edu/academics/academic-affairs/registrar/.

To "Accept" your Financial Responsibility Agreement:

1. Login to MyMoreheadState at my.moreheadstate.edu.
2. Select the “Self-Service” link.
3. Select “Student Finance” and then “Financial Agreement.”
4. Select the appropriate term, then click NEXT.
5. Read the agreement, then select "Accept" and click SUBMIT.

Student Billing and Payment Information

Pay Your Bill

You may view and pay your account online:

1. Login to MyMoreheadState at my.moreheadstate.edu.
2. Select the "Self-Service" link.
3. Select “Student Finance” and then "Make a Payment - Payment Plan" to pay your tuition and fees in full or to enroll in a payment plan.

You may also pay your bill in person or by mail at the Office of Accounting & Financial Services (207 Howell-McDowell, Morehead, KY 40351). There is a service fee of 2.0% of the transaction total if paying by debit/credit card. There is no service fee to pay with an electronic check.

Billing Statements

Morehead State University does not send out paper bills. Students will receive an email via their MSU email account once billing is available online via Self-Service Student Finance. It is the student's responsibility to check their MSU email account on a regular basis. After acceptance to the University, students should establish an MSU email address by visiting MyMoreheadState and selecting Eagle Account Center.

Tuition and Fee Schedule is available at https://moreheadstate.edu/admissions/tuition. Tuition and fees are subject to change without notice by the Council on Postsecondary Education and the University's Board of Regents. Morehead State University reserves the right to deny credit based on prior payment history.

Students may set up an individual as an “Authorized User” via Self-Service. Select the “User Options” icon to give an individual access to your student financial information.

Payment Plans

Morehead State University offers a payment plan for students who need to setup installment payments for their balance due. One-third of your balance and a $50 installment payment fee is due at the time of enrollment. (See Academic Calendar for due dates.)

- Fall semester – amount available for payment plan is divided into three payments due July/August (1st payment due at time of enrollment), September and October.
- Spring semester - amount available for payment plan is divided into three payments due December/January (1st payment due at time of enrollment), February and March.
- Summer – must pay account in full or enroll in a payment plan by the deadline date for each summer session. One payment plan will cover all summer sessions. (See Academic Calendar for deadlines.)
- Winter – must pay account in full before the start of the session (See Academic Calendar for deadlines.)

Students must make payments as scheduled above to avoid a late payment charge at the monthly rate of 1.0% on outstanding balances and to avoid having a hold being placed on their account.

Credit/Adjustments

Tuition, housing, and course fees may be credited to students who withdraw during certain time periods, following the start of each term. Meal plan and minimum dining club accounts may be credited in accordance with the percentages listed below or the actual account balance, whichever is smaller. All other fees are non-refundable.

Refund Periods and Amounts

Fall or Spring Semesters Refund Percentages

First six days of classes	100%
Next five days of classes	75%
Next five days of classes	50%
Next five days of classes	25%

No credits are given after the first 21 days of classes.

Maymester, Summer I, II and Winter Sessions

First two days of classes	100%
Next two days of classes	75%
Next two days of classes	50%
Next two days of classes	25%

No credits are given after the first eight class days of the session.

Summer and Nine-Week Sessions

First four days of classes	100%
Next two days of classes	75%
Next two days of classes	50%
Next two days of classes	25%

No credits are given after the first 10 class days of the session.

Refund Checks

A refund will be provided to you when payments (including financial aid, scholarships, and other outside sources of assistance) exceed your total charges. Students may choose to have their refunds direct deposited to the bank account of their choice. Direct deposit is strongly encouraged for student convenience.

To set up direct deposit:

1. Login to MyMoreheadState.
2. Select the "Self-Service" link.
3. Select "Bank Information" and "Add an Account."
4. Select "Activate" by the "Refund, Reimbursement & Payment Deposit" option.
5. Select "Next."
6. Enter your bank information.
7. Agree to the terms and conditions and submit.

Refund checks will be direct deposited three to four weeks after classes begin. If direct deposit is not set up, checks will be mailed to your permanent home address. Due to federal regulations, direct loan funds cannot be disbursed until 30 days after the first day of classes for first-time, first-year borrowers of a Federal Direct Loan.

1098-T Tax Information

Elect to receive your annual IRS 1098-T Tax Form electronically. This form is required to determine if you are eligible for an Education Tax Credit when you file your tax return.

1. Login to MyMoreheadState.
2. Select the "Self-Service" link.
3. Select "Tax Information," then select "1098 Information."
4. Select the option to receive your 1098 only in electronic format.
5. Click "Save."

Authorized User Setup

You may set up an individual as an “authorized user” to give them access to your student financial information.

1. Login to MyMoreheadState.
2. Select the “Self-Service” link.
3. Select the “user options” icon.
4. Select “View/Add Authorized User Access.”

Financial Aid

Office of Financial Aid
Enrollment Services Center, Room 205
121 East Second St.
Morehead, KY 40351
Phone: 606-783-2011/Fax: 606-783-2293
finaid@moreheadstate.edu

The University offers a broad program of financial assistance to eligible students in the form of grants, loans, scholarships and work.

In many cases, financial aid is made up of a combination of the various types of assistance available (a financial aid package). Students who have been admitted and are enrolled for credit in a degree program are eligible for financial aid funds provided they also meet all other eligibility requirements for aid. Financial assistance is granted, depending on the availability of funds, to all eligible students regardless of sex, race, color, or ethnic origin. About 90% of undergraduate students attending MSU receive scholarships or other financial aid.

The type and amount of financial aid is generally based on demonstrated financial need, academic achievement, test scores, and other talents and interests. Financial need is determined through analysis of the Free Application for Federal Student Aid (FAFSA). The FAFSA is analyzed to determine the expected contribution of the student and/or parents toward educational expenses.

Students apply for financial aid by completing the FAFSA online at https://studentaid.gov/. Applying early increases the chance of receiving financial aid. Most financial aid is credited to students' accounts, one-half of the year's award for the fall semester and the other half for the spring semester.

Federal regulations restrict the total amount of funds for which students may be eligible. A student's financial aid package, including federal, state, private and/or institutional aid, cannot exceed MSU's established "cost of attendance" for any given year. Students who receive more than the amount for which they are eligible will be required to repay the amount of the over-award.

Over-awards can be avoided if the student will:

1. Check with the Office of Financial Aid to see if the maximum needs have been met before applying to other aid programs.
2. Make sure all information reported on the FAFSA is correct.
3. Notify the Office of Financial Aid of any aid received from outside or third-party sources.

Financial Aid Options

Scholarships

Students who have been admitted to MSU should refer to the MSU scholarship search site, available at www.moreheadstate.edu/scholarships for current information about scholarships.

Grants

Repayment is normally not required for the Federal Pell Grant, Federal Supplemental Educational Opportunity Grant (SEOG) or College Access Program Grant (CAP). To be considered for these grants, you must complete the FAFSA at https://studentaid.gov/.

- **Federal Pell Grant:** A federally funded program; eligibility and amount are determined by a standard financial needs analysis formula.
- **Federal SEOG:** A federally subsidized award based on need.
- **CAP Grant:** A state program based on need.

Work-Study Programs

The work-study programs provide work in a variety of offices and departments at the University. Students may apply for open positions by submitting an application and resume on CareerNet at https://morehead-csm.symplicity.com/students/?signin_tab=0&ignin_tab=0.

- **Federal Work-Study Program** (FWSP): A federally subsidized program based on need.
- **Institutional Work-Study Program** (IWSP): Sponsored by the University, this program is geared to students with specific skills, talents or experience.

To inquire about a Veteran Affairs (VA) Work-Study position, contact the VA Certifying Official at 606-783-2008.

Loans

Loans must be repaid, and are available in differing amounts and under varying conditions. Types are Federal Direct Stafford Loan, Federal Direct Stafford Plus Loan, and the Emergency Loan Fund.

- **Federal Direct Stafford Loan:** Allows students to borrow money directly through the institution. These loans may be need-based (subsidized) or non-need based (unsubsidized). Students must be enrolled in at least six credit hours.

- **Federal Direct Stafford PLUS Loan:** Allows parents and/or stepparents of dependent undergraduate students to borrow money for student educational expenses.
- **Emergency Loan Fund:** Administered by the Office of Financial Aid, this fund assists students in emergency situations. Students may borrow small amounts on a short-term, no-interest basis, depending on funds available. Apply in person at the Office of Financial Aid.

Entitlements

Entitlement programs include Veterans Administration Educational Assistance GI Bill® and benefits for veterans' dependents, tuition waiver for dependents of Kentucky veterans, and Vocational Rehabilitation Assistance.

- **Veterans Administration (V.A.) Educational Assistance:** Eligible veterans (GI Bill®) and/or eligible children, wives and spouses of veterans who died or were permanently and totally disabled as the result of service in U.S. Armed Forces (V.A. benefits program) may apply for education benefits. Eligibility is determined by the V.A. For information and application forms, contact Veterans Administration Regional Office, P.O. Box 66830, St. Louis, MO 63166-6830, 1-888-442-4551 or apply at www.gibill.va.gov.
- **Tuition Waiver for Dependents of Kentucky Veterans, Police Officers, Firefighters or Volunteer Firefighters:** A waiver of tuition for eligible dependents (children, spouses, and widows) of totally disabled or deceased Kentucky war veterans, police officers, firefighters or volunteer firefighters, who died or were permanently and totally disabled as a result of services in the U.S. Armed Forces, Kentucky law enforcement agencies, as a firefighter, or volunteer firefighter. For information, call the Office of Financial Aid at 606-783-2011.
- **Vocational Rehabilitation:** Eligible individuals with physical or emotional disabilities may qualify for education benefits. Eligibility is determined by the Vocational Rehabilitation Service in the student's community. Students already enrolled at the University should contact the Vocational Rehabilitation Office, 1225 US Hwy 60, Suite 106, Morehead, KY 40351, 606-780-2287.
- **Army Reserve Officers' Training Corps Subsistence Allowance:** Eligible individuals enrolled in advanced military science classes may qualify for education benefits that consists of a tax-free allowance of $300-$500 per school month. Contact the Professor of Military Science, MSU, 309 Button Auditorium, Morehead, KY 40351, 606-783-2050.

For additional information pertaining to all financial aid programs, visit: www.moreheadstate.edu/finaid. For information about veterans' benefits and support, visit www.moreheadstate.edu/veterans.

Veterans' Benefits

Morehead State University is approved by the Kentucky State Approving Agency for Veterans Education (SAA) to offer V.A. Educational Benefits (GI Bill®) to eligible individuals enrolled in approved programs.

Eligible veterans (G.I. Bill®) and/or eligible children, and spouses of veterans who died or were permanently and totally disabled as the result of service in U.S. Armed Forces (V.A. benefits program) may apply for education benefits. Eligibility is determined by the V.A. For information and application forms, contact Veterans Administration Regional Office, P.O. Box 66830, St. Louis, MO 63166-6830, telephone toll free 1-888-442-4551 or apply for benefits at www.gibill.va.gov.

The University will protect the schedules of G.I. Bill® and Vocational Rehabilitation & Employment beneficiaries (Chapter 33 and Chapter 31 beneficiaries) for up to 90 days from the date the beneficiary provides a certificate of eligibility, or valid VAF 28-1905. This will allow those students to attend courses until the V.A. provides payment to Morehead State University. The University will not impose a penalty, or require the beneficiary to borrow additional funds to cover tuition and fees due to late payments from the V.A.

For additional information, contact the school certifying official in the Office of the Registrar, 201 Ginger Hall, 606-783-2008 or email registrar@moreheadstate.edu.

**GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA).*

Eligibility for Veteran's Benefits

You are eligible for benefits if your military service places you in one of the following chapters:

- Chapter 30 — Montgomery G.I. Bill® for active-duty veterans.
- Chapter 31 — Vocational rehabilitation benefits for disabled veterans.
- Chapter 33 — Post 9/11 G.I. Bill® for active-duty veterans, implemented August 1, 2009.
- Chapter 1606 — Provides benefits to students participating in the National Guard and/or Reserves.
- Chapter 1607 — Educational assistance for reserve component members supporting contingency operations and certain other operations. Also referred to as REAP.

LTC Alan R. Baldwin Veterans Center

The LTC Alan R. Baldwin Veterans Center, located in 304 Breckinridge Hall, was established to build on the University's continued efforts of providing MSU's military and veteran students with the service, support and assistance they have earned. The goal is to eliminate obstacles and ensure that our veterans transition to college with greater ease.

The center will assist prospective and current student-veterans by providing counseling and direction on all educational benefits, as well as enrollment and registration assistance, counseling resources and referrals, and academic and career assistance. In addition, the center may be used for student veterans to study, relax and reconnect with their fellow student-veterans.

The center will be open Monday-Friday, from 8 a.m. until 4:30 p.m. It is equipped with study tables, computer, refrigerator, microwave, couches, recliners and a flat-screen television. The center is also an approved study area for provisional student-veterans on academic probation. For more information on the LTC Alan R. Baldwin Veterans Center, contact the Director of Military Initiatives at 606-783-9416.

Military Credit

As a Service Member Opportunity College (SOC), Morehead State University awards military credits in accordance with SOC and the American Council on Education (ACE) guidelines. Therefore, military credit will be awarded after careful analysis by academic departments to determine the comparability of the learning outcomes of the military course and the course at the University for which credit is being sought. This process is in accordance with UAR 115.04.

Military Occupational Specialty and Other Military Credit

When a service member presents documentation of Military Occupational Specialty (MOS) or other military credit to the registrar and requests Morehead State University credit, the registrar will route the request to the department chair of the service member's program of study for evaluation until an equivalency list has been established. An equivalency database will be maintained and reviewed annually.

Monitoring:

The University Undergraduate Curriculum Committee will review the procedure annually and recommend changes to the provost and vice president for academic affairs.

Residency Requirements:

Academic residency requirements will be up to 50% of the undergraduate degree program for service members.

Selective Service Registration Requirement

Male students must be registered with Selective Service (if required to register) before they can receive Title IV student financial aid (Federal Pell Grant, Federal SEOG, federal work-study, Federal Perkins Loan, Federal Direct Loan, Direct Plus Loan). Contact the Office of Financial Aid at 606-783-2011 for more information.

Satisfactory Academic Progress for Financial Aid Purpose Policy

The Higher Education Act mandated institutions of higher education to establish minimum standards of "satisfactory academic progress" for students receiving financial assistance. This means that a student must make progress toward obtaining an appropriate degree or certificate during each term that the student is enrolled. These standards are applicable to all federal, state and institutional aid programs administered by Morehead State University.

To continue to receive financial aid at MSU, a student must demonstrate satisfactory academic progress by completing a minimum number of the total hours attempted and by also maintaining a minimum GPA. MSU's satisfactory academic progress schedule is as follows:

1. A student must successfully complete a minimum of 67% of the credit hours attempted. Successful completion for this purpose is defined as receiving a grade of "D" or better.
2. Students must have a cumulative GPA of 2.0 or higher by the end of the second year (four semesters) and each evaluation period thereafter.
3. A student has attempted no more than 150% of the number of hours required for their degree.

Policies and Procedures

The specific policies and procedures to be used in applying the satisfactory progress standards are outlined below:

1. Satisfactory progress will be evaluated at the end of each spring semester.
2. Hours attempted for purposes of this policy will be defined as those for which a student receives a grade of A, B, C, D, E, F, I, IP, K, N, P, R, U or W.
3. For undergraduate students, grades of E, F, I, IP, N, P, R, U and W will not qualify as successful completion of hours attempted.
4. Noncredit remedial courses, courses taken for audit, and courses in which grades of K or P are received are not figured in the calculation of a student's GPA.
5. If otherwise eligible, students will be given financial aid during a term in which they may be repeating a course. Financial aid can pay for the repeat of a passed course only one time.
6. A student who fails to maintain satisfactory progress as defined will not be permitted to receive federal, state or institutional financial aid.

Appeal Procedure for Students Who Fail to Maintain Satisfactory Progress Standards for Financial Aid

Students who fail to meet satisfactory progress standards, as defined, may appeal the ruling to the Office of Financial Aid if they believe extenuating circumstances led to their failure to maintain satisfactory progress. Those desiring to appeal must do so in writing on the Unsatisfactory Academic Progress Appeal for Student Financial Aid form and must attach supporting documentation. Copies of the appeal form may be obtained in the Office of Financial Aid or online at https://moreheadstate.edu/admissions/finaid/forms. Students will be notified in writing of the action taken on their appeal. Financial aid eligibility will be reinstated for all students whose appeals are approved.

Reinstatement of Financial Aid Eligibility

Students who do not appeal or have an appeal denied can regain eligibility for financial aid by enrolling for a subsequent academic term (fall, spring or summer term) at his or her own expense, satisfying the satisfactory progress definition.

Financial Aid and Fee Terminology

The following terms are important:

Census date is normally the last day to add a full semester class per the University academic calendar. Enrollment on the census date determines eligibility and amounts for financial aid awards.

Financial aid package is a combination of different types of financial aid that may make up an award.

Full-time refers to enrollment for 12 credit hours or more during the fall, spring or summer semester.

Grant is a type of aid that generally requires no repayment. Eligibility is based on calculated financial need.

Loan is a type of aid that must be repaid, generally after the student is out of school. These low-interest loans may be based on calculated financial need. Some loans are not need-based.

Need is the difference between the average cost to attend MSU for an academic year and the expected contribution from your family. It is a primary factor in determining eligibility for most available aid.

Part-time refers to enrollment for fewer than 12 credit hours during the fall, spring or summer semester.

Residency is an in-state/out-of-state classification for fee assessment purposes. Policy guidelines are established and approved by the Kentucky Council on Postsecondary Education. Students or prospective students with questions related to their residency for fee assessment purposes should contact the Office of Enrollment Services for additional information or for the necessary forms used in making a determination.

Scholarships are generally awarded on the basis of academic achievement or special talent. They generally do not have to be repaid. Eligibility requirements and obligations vary from scholarship to scholarship.

Tuition is the fee charged for class enrollment.

Undergraduate is a student who has not completed the requirements for a bachelor's degree.

Work-Study Programs provide part-time employment for eligible students to help with educational expenses. The work schedule is built around the student's academic schedule. Students receive a paycheck for actual hours worked. The award does not credit toward the student's account and/or payment plan.

Student Health Services

The Office of Counseling and Health Services (CHS), located on the first floor of Allie Young Hall, provides all MSU students with mental and physical health services. The clinic is open from 8:00 a.m. to 4:30 p.m., closed daily for lunch from 12:00 p.m. to 1:00 p.m., Monday through Friday. The clinic is closed on university-observed holidays but does remain open throughout the summer. Call our clinic at 606-783-2055 to schedule an appointment.

Medical Services

The CHS Caudill Health Clinic (medical services) is operated by St. Claire Healthcare. Medical services and treatment are billed to the

student/student's insurance by St. Claire. Students are responsible for payment of the billed service/treatment and are encouraged to have health insurance. Uninsured students may apply for assistance with their medical bill through a Student Government Association fund that is held by the clinic, however this assistance is not guaranteed.
Medical services available include, but are not limited to:

- Wellness visits
- Sick visits
- Immunizations
- Flu shots
- Family planning
- STD testing and treatment
- Allergy injections
- Physical exams

Mental Health Services

The CHS Counseling Clinic provides mental health services at no cost to the student. Health insurance is not required and no funds are collected from students for appointments. Any additional referrals made to other facilities from our staff for continuing treatment/referrals for mental health treatment or medication will be the responsibility of the student to pay. Mental health services available include, but are not limited to, treatment for:

- Depression
- Anxiety
- Eating disorders
- Substance abuse
- Identity issues
- ADHD behavioral strategies
- Crisis intervention
- Other mental health disorders

Alcohol and Other Drug Education

The professional staff of Counseling and Health Services provides a variety of prevention programming and treatment to address issues related to alcohol and substance abuse. A licensed mental health counselor serves as a coordinator for networking members of the University community with local and regional programs and services that assist individuals with alcohol and substance abuse related problems.

Outreach Education

Our team is available to provide information to students in a classroom setting regarding physical and mental health services as well as information regarding enrolling students without insurance into the Kentucky Medicaid program. The team can also provide handouts regarding service information and connections for the Kentucky Medicaid Program at the request of the student.

Our mental health counselors have special expertise in the realm of emotional/psychological issues, human relationships and substance abuse. This expertise is available and shared with the total university community by request through consultations, in-service training, educational programming, and class presentations on personal, social, and psychological topics.

For more information regarding these resources or to make a request for a presentation, please call the clinic at 606-783-2055 to speak with a CHS representative. Requests for presentations must be made at least two weeks in advance.

Testing Center

The Testing Center provides testing services to the University and the region. Testing is conducted on a daily basis by appointment or prior registration. Established testing programs include ACT, SAT, KYOTE, ACCUPLACER, CLEP, GED, LSAT, Kryterion Certification testing, Miller Analogies, the PRAXIS Series, Kentucky Principals Exam, various departmental proficiency examinations and distance learning proctoring. To learn more, contact the Testing Center, 501 Ginger Hall, 606-783-2526 or https://moreheadstate.edu/academics/testing/.

For more information on credit for prior learning, contact the Office of Adult Education and College Access, 211 Education Service Building, 606-783-2005 or https://moreheadstate.edu/academics/regional-outreach/adult-learning-center.

Credit-by-Examination

Morehead State University awards academic credit toward a bachelor's degree or an associate degree for those scoring satisfactorily on any of the following examinations:

1. The Advanced Placement Program (AP)
2. The College Level Examination Program (CLEP)
3. Departmental Examinations
4. International Baccalaureate (IB)

Credit-by-examination is not recorded on a permanent transcript in the Office of the Registrar until the student qualifying for credit enrolls at Morehead State University. Credit-by-examination is recorded as "K" credit; hence, it has no effect on GPA.

Advanced Placement Program

Students may earn college credit through the Advanced Placement Program of the College Board upon completion of courses and special examinations taken in high school. The AP score should be sent from College Board to the Testing Center, Morehead State University, 501 Ginger Hall, 606 783-2526, at the time application for admission is submitted or as soon as possible thereafter. Upon enrollment at MSU, the student should notify the Testing Center so that proper credit will be posted to the transcript. For specific examination and equivalent MSU courses information, visit https://moreheadstate.edu/academics/testing/.

College-Level Examination Program (CLEP)

Students of all ages interested in obtaining a college education have reduced expenditures in time and money by successfully completing college-level examinations. Many American colleges encourage students to take CLEP tests for credit in subjects they have mastered.

Students may register for CLEP examinations at MSU by contacting the Testing Center, 501A Ginger Hall, 606-783-2526. For score requirements to earn credit hours through CLEP examinations, contact the Testing Center at the address and phone number above or visit https://moreheadstate.edu/academics/testing/.

Departmental Examinations

Students enrolled at Morehead State University may also receive credit on the basis of departmental examinations. A department may choose to develop an appropriate exam or adopt a standardized examination from outside the University.

Those wishing to take a departmental examination must contact the appropriate academic department chair for approval. Prior to taking the exam, the student must pay an exam fee in the Testing Center, 501A Ginger Hall.

International Baccalaureate (IB) Program

Students enrolled may receive course credit earned through the International Baccalaureate (IB) Program offered by their high schools. Students must submit an official IB transcript for evaluation of scores. IB credit is recorded as "K" credit and is not included in the MSU GPA.

Additional Student Services

Alumni Association

The mission of the Morehead State Alumni Association is to support the commitment of MSU to excellence in its academic and athletic programs, participate in the efforts of the University to attract outstanding students, and develop permanent friends and loyal supporters of the University.

All graduates and former students are encouraged to be active donors in the Alumni Association by making an annual contribution of $25 or more to the MSU Foundation Inc.

All graduates receive University updates via our online magazine, Statement, as well as our monthly e-newsletter, eStatement. In addition, alumni receive invitations to special events and activities in the Morehead region and beyond. Active donors also receive discounts at the University Store, discounted memberships at the Recreation and Wellness Center, and access to the Alumni Scholarship – a unique scholarship available only to children, grandchildren, spouses or parents of MSU alumni.

The Alumni Association plans several annual events in an effort to engage all MSU alumni in a mutually beneficial, lifelong connection to each other, their school and the University while encouraging alumni support and guidance to advance MSU for future generations. For more information on upcoming events and ways you can be involved with your alma mater, visit alumni.moreheadstate.edu.

Camden-Carroll Library

Camden-Carroll Library is the information center of Morehead State University. The library's collection of books, journals, newspapers and government documents, in both print and electronic format, support the University's curriculum and provide a wealth of materials to meet students' research, recreational and personal enrichment needs. The library has public workstations located throughout the building to afford students access to a large variety of web-based resources, including the most relevant online journals and databases.

The goal of the Camden-Carroll Library is to promote information literacy skills, which include the ability to find, evaluate and use information effectively and ethically. The research services staff provides students with one-on-one help searching for and finding materials in the library and online, in person through a service desk and by appointment or remotely through virtual chat or email. Instructional services staff provides subject and assignment specific instruction for individual classes, supports First Year Seminar students and also conducts building tours. The library also offers two courses to help students improve these skills: LSIM 101: Introduction to Library Research and LSIM 201: Living in an Information Society. Through its Request & Delivery services, the library participates in state and national resource-sharing networks to deliver materials not held in Camden-Carroll Library. This includes print materials and electronic delivery of certain items.

The Regional Campus Library Services office is responsible for providing research, document delivery and instructional services to faculty and students in any of MSU's regional campuses, distance learning or internet programs.

The Learning Resource Center (LRC) is a multimedia center containing computer software, video recordings and DVDs, audio cassettes and CDs, kits and teaching aids, as well as children's literature and a preschool-grade 12 collection of textbooks and curriculum guides.

The Learning Technology Lab consists of workstations providing hardware and software for creating computer graphics, websites and presentations. The lab includes color scanners, digital cameras, video capture/edit capability, color printers and a wide variety of software packages. Staff is on hand to assist students with their technology needs.

The library is open seven days a week when classes are in session. Call 606-783-2200 to request services. For more information, visit research.moreheadstate.edu.

Distance Education and Instructional Design

Morehead State University offers numerous distance education classes to students in the region through advanced technology. Students earn credit toward a degree by interacting with their peers and professors through video conferencing and internet classes. For more information on the courses available through distance education, contact the Office of Distance Education and Instructional Design, 100 Camden-Carroll Library, 606-783-2140 or 800-585-6781, option #3.

Regional Campus System

Morehead State University maintains regional campus centers in Ashland, Mt. Sterling and Prestonsburg. Courses are also offered at the University Center of the Mountains in Hazard, for the purpose of providing higher education access to place-bound and time-bound students who are geographically remote from the Morehead campus.

MSU at Ashland

1400 College Drive, Suite L272
Ashland, KY 41101
606-783-2901
606-327-1777
800-648-5370
https://moreheadstate.edu/academics/regional-outreach/campuses/msu-at-ashland

MSU at Mt. Sterling

Clay Community Center
3400 Indian Mound Drive
Mt. Sterling, KY 40353
606-783-2078
859-499-0780
866-870-0809
https://moreheadstate.edu/academics/regional-outreach/campuses/msu-at-mt.-sterling

MSU at Prestonsburg

6 Bert Combs Drive
Prestonsburg, KY 41653
606-783-5421
606-886-2405
800-648-5372
https://moreheadstate.edu/academics/regional-outreach/campuses/msu-at-prestonsburg

University Center of the Mountains

Hazard Community and Technical College
J. Marvin Jolly Classroom Center
1 Community College Drive, Hwy 15
Hazard, KY 41701
606-487-3182
800-246-7521 ext. 73182

Education Abroad Programs

Morehead State University offers students a variety of education abroad opportunities in various countries around the world. The majority of these

programs grant academic credit upon successful completion of the program. For any education abroad program that awards academic credit, students may apply for any student loans or grants for which they would normally be eligible.

As a member of the Cooperative Center for Study Abroad consortium, the University is able to send faculty and students to English-speaking countries such as England, Scotland, Ireland, Ghana, Australia, Jamaica, Belize and India for educational offerings in a variety of subject areas. Programs are scheduled during the December/January interim, summer sessions, or the spring semester. Internships are also available. Students can earn from three to six credit hours depending on the length of the program in which they are enrolled.

MSU is a participant in the Kentucky Institute for International Studies, a consortium allowing University faculty and students to travel to study centers around the world, including such countries as France, Austria, Italy, Greece, Spain, China, Costa Rica, Denmark, Ecuador, Germany, Japan, Mexico and Turkey. Courses are offered during the summer sessions and focus on languages, the humanities, social sciences, business, education and environmental sciences. Full semester programs are also available in Germany, France, Mexico and Spain.

For additional information on education abroad opportunities, visit https://moreheadstate.edu/student-support/career-ready/education-abroad/ or email educationabroad@moreheadstate.edu.

International Student Services

The International Student Services Director/SEVIS provides assistance and support during international student entry to MSU, coordination and documentation of compliance with immigration regulations and cross-cultural programs for international education. International students must consult the Office of International Student Services at the beginning of each semester to register in SEVIS and when:

- Applying to extend or change immigration status
- Transferring to or from the University
- Dropping classes below a full-time enrollment
- Leaving the University for any reason
- Accepting employment for the first time or engaging in summer employment
- Changing residence/phone numbers
- Seeking optional or curricular practical training
- Applying for a Social Security number
- Applying for a driver's license
- Planning to leave and re-enter the United States, while still a student
- Applying for reinstatement
- Changing from one academic level to another
- Changing from one academic program to another
- Seeking dependent status for spouse and/or children

The International Student Services Director/SEVIS is located at 234 Adron Doran University Center, Morehead, KY 40351 or by telephone 606-783-2096. For more information concerning international students, visit https://moreheadstate.edu/admissions/international-student-services/.

International Student Health Insurance Requirements

MSU requires regularly enrolled international students, and those dependent family members living with them in the country, to have health and accident insurance that includes a repatriation benefit. A medical benefits plan for international students is offered through a contracted agent. International students must meet the insurance requirements to complete their enrollment at Morehead State University. The International Student Services Office monitors compliance to this program and assists international students with questions relating to health insurance.

It is our experience that most health benefit policies students obtain in their home countries do not meet the minimum requirement of benefits required by the University. These requirements are a $250,000 medical benefit (per accident/illness), $50,000 medical evacuation benefit and a $25,000 repatriation benefit, in addition to the policy maximum. For the University to consider a waiver of the insurance requirement, students must present an English translation of benefits with amounts converted to American currency from the insurance company. Premiums are paid on an annual basis.

Student Publications

The Trail Blazer, the official student newspaper, is published weekly for free distribution on the campus. Visit *The Trail Blaze*r online at: www.thetrailblazeronline.net.

Inscape, the biannual literary magazine, solicits poetry, prose, and other creative writing and art work from University students. Visit *Inscape* online at: www.moreheadstate.edu/inscape.

Student Support Services

This program serves students who are first generation college students, meet low-income guidelines, or have a physical or learning disability. An individualized educational plan, which may include tutoring, advising, counseling and cultural enrichment, is designed to meet the unique needs of each student. For information about the program stop by 205 Allie Young Hall, or call 606-783-2614, or visit https://moreheadstate.edu/academics/regional-outreach/trio/student-support-services.

Student Trip Insurance

Student trip insurance is available for students accompanying faculty and staff on University-sponsored field trips. The cost is minimal and all applicable students are strongly encouraged to obtain this coverage prior to the date of departure.

Trip insurance is available from the Office of Environmental Health and Safety. Application forms may be obtained by calling 606-783-2179. The completed application form must be returned to the Office of Environmental Health and Safety a minimum of 72 hours prior to the date coverage is to become effective. For students traveling outside the country, international travel identification cards may also be obtained through the Office of Environmental Health and Safety.

Technology Resources

Morehead State University, through the Office of Information Technology, provides a variety of computing resources in support of instructional, administrative, alumni and research activities.

More than 3,000 microcomputers located in classrooms, labs and offices are replaced on a regular cycle to maintain state-of-the-art desktop technology across campus. The University maintains networked student labs/classroom facilities available to students throughout the campus. All instructional facilities, residence hall rooms and administrative facilities are attached to a newly renovated, high-speed network that provides data access. Additionally, all residence hall rooms, classroom buildings and selected commons areas across campus provide secure wireless access.

Access to student services such as course registration, financial aid processing and fee payments is available to students and prospective students through the campus portal at my.moreheadstate.edu. Residence hall students also receive free cable television service. MSU does not provide any type of telephone service to the residence halls.

Waiver Policy

Morehead State University follows the Council on Postsecondary Education (CPE) Faculty and Staff Tuition Waiver Policy:

An institution is not required to offer a course during an academic term unless there are a sufficient number of tuition-paying students taking the course. An institution may restrict enrollment in a course if space is not available.

Consistent with CPE policy, MSU classes are offered when there are sufficient tuition-paying students to do so. Students using waivers are enrolled in a class when there is sufficient capacity remaining after accounting for tuition-paying students.

While MSU is pleased to honor waivers, please keep in mind that accepting waivers does not necessarily mean a course will be offered or that a student using a waiver will be enrolled in a given course.

Student Success

Academic Advising

MSU and the Office of Retention and Academic Advising is committed to overall student success. Academic advising is a crucial component to helping students succeed. Students are assigned an academic advisor to provide guidance in their major and success coaching, as well as career planning and placement.

Additionally, MSU has professional advising staff in each college to help students navigate their degree plan, course scheduling and other questions they may have throughout the transition to college life. The professional advisors work collaboratively with faculty advisors to ensure that each student has access to high-quality academic guidance and support.

For additional information, contact the Office of Retention and Academic Advising at 606-783-2084 or visit https://moreheadstate.edu/student-support/advising-tutoring/advising/.

Advisor Assignment

Although students may not have a primary advisor assigned when they register, department chairs and academic advisors are available to assist students. A permanent advisor is assigned during the first two weeks of the first semester of enrollment. Students who have declared a program of study should see the chair of that department for the name and office location of their advisor. Provisional studies students or students who have not declared a major may contact the Office of Retention and Academic Advising in 321 Allie Young Hall or by calling 606-783-2084. Students should actively seek advisement from their academic advisor throughout their educational career. Further, students are strongly encouraged to meet early and frequently in the first semester, and subsequent semesters, to discuss and develop a comprehensive academic plan.

Required Advisor Contacts

It is essential that students maintain a close relationship with their academic advisors through frequent visits. Students must touch base with the advisor periodically for the following purposes:

1. To obtain the advisor's approval of the trial schedule prior to registration
2. To plan current and future class schedules
3. To initiate class changes during the drop/add period
4. To complete the online program evaluation to further map out the academic plan. Transfer students should schedule a conference at the beginning or prior to their first semester at MSU

Note: Students are responsible for verifying and entering his or her own schedule electronically. Advisors are not authorized to make official electronic changes to course schedules.

Minority Retention and Academic Services

Minority academic services include advising, mentoring, workshops, tutoring and study groups for minority students. For more information, call the Office of Retention and Academic Advising, 606-783-2084.

Nontraditional and Commuter Student Counseling

The Director of Transition Services serves as a resource for all undergraduate, nontraditional students who are 23 years of age or older, as well as all commuter students.

The Director of Transition Services serves as an advocate for the increasing the number of adult learners, student-veterans, and Project Graduate students at MSU. The director helps link these students to academic and campus resources for concerns such as study habits, time management, family, career, counseling and financial needs.

The director is located in 100 Enrollment Services Center and can be reached at j.timmermann@moreheadstate.edu or 606-783-5488.

Center for Career Development and Experiential Education

The Center for Career Development and Experiential Education, located on the ground floor of the Camden-Carroll Library, helps you explore, connect, experience and succeed! Whether you're exploring your major options, looking to gain hands-on experience in your field, or are ready to launch your career, the Center's staff are prepared to assist you at every step on your personal path to success. *Explore* your personality, interests, values and skills with an experienced counselor. *Connect* with a range of tools to help you determine the career options for your major and identify the employers in your particular field. Begin networking at career fairs each semester. *Experience* through internships, service learning, undergraduate research and/or education abroad as the Career Center can help you find ways to turn classroom learning into real-world application. The Center also offers cooperative education courses designed to provide hands-on experience in a community or field-based setting. *Succeed* in life after graduation, as the Center assists you in building your job search strategy, polishing your resume and sharpening your interview skills.

Activate your free Eagle CareerNet account, MSU's online career management system, to learn about career programming and activities, search and apply for on-campus jobs, find internships, part-time and full-time employment, and more. For additional information, visit www.moreheadstate.edu/career or call 606-783-2233.

College Readiness Requirements

College readiness courses help many MSU freshmen succeed by providing preparatory classes in writing, mathematics, and reading.

Students with ACT subscores below 18 in English, 19 in mathematics or 20 in reading must enroll in special sections of the courses in these areas, known as enhanced courses, that provide supplemental instruction to better support students for success. These requirements are based on the Kentucky College Readiness Standards. Any student who scores below the readiness standards will be required to take a placement test in each area of need before the first day of classes. Information about placement testing is available through the MSU Testing Center, or at https://moreheadstate.edu/student-support/college-readiness/.

Incoming students who have two or more college readiness course needs are encouraged to enroll in the Success Academy during the summer prior to their first academic year.

Students required to enroll in college readiness classes must:

1. Pass their enhanced courses.
2. Complete college readiness requirements within the first 30 credit hours. Students who do not complete all college readiness requirements within the first 30 credit hours must complete the required course(s) before enrolling in additional college-level courses or obtain a letter of exception from the Director of Academic Advising and Retention.

3. Not drop college readiness courses without the approval of both the advisor and the director of college readiness.

For additional information regarding college readiness, contact the Office of Retention and Academic Advising, 606-783-2084, or visit: https://moreheadstate.edu/student-support/college-readiness/.

Probation and Suspension

Academic Probation

Students failing to meet the scholastic standards listed in UAR 123 are placed on academic probation. Students on academic probation should retake as many classes as possible in which they earned a grade of E, D, or U. Students on academic probation will be required to participate in the Academic Recovery Program through the Office of Retention and Academic Advising.

Academic Recovery Program

The Academic Recovery Program is designed to provide resources and services to students who fall below scholastic standing guidelines. Students in the program are required to participate in an academic workshop at the beginning of the semester, complete an action plan, submit progress forms when requested, and meet with a peer coach throughout the semester. Students in the Academic Recovery Program are strongly encouraged to complete documented study hours and/or tutoring interactions. Note that the Academic Standards and Appeals Committee, the academic advisor or other designated personnel may require additional conditions for students on academic probation.

Visit https://moreheadstate.edu/student-support/advising-tutoring/advising/probation-suspension/probation for additional information regarding the Academic Recovery Program. The Office of Academic Advising and Retention can be reached at 606-783-2084, 321 Allie Young Hall.

Suspension

Any student, who after one probation semester does not achieve a semester GPA of 2.0 or the cumulative GPA necessary to meet scholastic standing guidelines (listed in UAR 123) is subject to suspension from the University. The suspension period following a fall semester is the spring semester; following a spring semester, the suspension period is for the summer terms and fall semester. During a suspension period, a student will be ineligible to enroll for any credits at MSU.

Students suspended under this policy have the following two options:

1. Appeal by petitioning the Academic Standards and Appeals Committee - If the student believes the suspension was the result of circumstances beyond his or her control, he or she may appeal the decision to the Committee on Academic Standards and Appeals. If an appeal of the suspension is granted, the student must meet all additional requirements set forth by the Committee on Academic Standards and Appeals to return. The committee may, in some cases, waive the requirement that the student have attempted 30 semester hours before declaring academic bankruptcy. Requests for apparels are made through the Office of Retention and Academic Advising.
2. Reapply for admission after one semester - Students wanting to return to MSU after suspension will need to complete a new application and meet with the admissions appeal committee before being readmitted as a student. Students requesting an admissions appeal must submit a complete Action Plan (signed by an academic advisor) including a two-semester plan and a statement that they have met with their financial aid counselor. The admissions appeal committee may also require additional documentation.

Please note that readmission or the acceptance of a suspension appeal does not guarantee that financial aid will be granted. There is a separate financial aid appeal process. The requests for financial aid appeals are made in the Office of Financial Aid.

Provisional and Conditional Students

Provisional Admission

An academic enrichment program that provides students with access to individualized academic advising, peer-facilitated support and other services that focus on academic success throughout the first year of college. Provisionally accepted students will participate in the Eagle Success Program (p. 22) with the option of participation in the Success Academy (p. 23).

Conditional Admission

Students in this category are strongly encouraged to participate in the Success Academy (p. 23) in the summer. Successful completion of Success Academy (GPA of 2.50 or higher) will allow students to move to provisional status. Participation in the Eagle Success Program (p. 22) is required.

Eagle Success Program

The Eagle Success Program (ESP) is designed to offer students a wide variety of services and resources to help ensure academic success. The components of the ESP include free tutoring, one-on-one personalized advising and peer coach interactions. When possible, students will be placed in enhanced First Year Seminar courses that include remediation of the reading college readiness deficiency along with additional success focused opportunities

Conditionally and provisionally admitted students are assigned to academic advisors in the Office of Retention and Academic Advising. These advisors will monitor and coordinate academic activities in collaboration with the student while connecting the student to various levels of support across campus. Conditionally and provisionally admitted students work with their advisor(s) to design a plan of remediation through enhanced courses, as applicable based on placement testing scores, and the grades earned for those courses are computed in the student's GPA.

To successfully exit the Eagle Success Program and enroll in a degree program at the University, a student must:

1. Complete all required placement testing.
2. Complete any and all required enhanced/corequisite courses and FYS 101.
3. Successfully complete two semesters with a cumulative GPA of 2.0. However, early exit from the Eagle Success Program is possible after the first semester with a MSU GPA of 3.0 or higher and successful completion of college readiness courses, including FYS 101.
4. Successfully complete at least 24 semester hours, 12 of which must meet general education requirements.
5. Meet with the assigned peer coach three times per semester.
6. Attend a minimum of five hours of documented study tables per week at an approved study location.
7. Meet with an assigned academic advisor each semester in the Office of Retention and Academic Advising, a minimum of three times per semester.
8. Complete a career assessment with the Office of Career Services if deemed necessary by the advisor, if no intended major is decided.
9. All students in the Eagle Success Program are strongly encouraged to participate in Success Academy the summer prior to the fall semester.

Students in the Eagle Success Program may not declare a major and exit the program until all requirements have been satisfied. Failure to satisfy

the requirements of the Eagle Success Program by the end of the freshman year may result in a delay in declaring a major. For more information, contact the Eagle Success Coordinator/Academic Advisor, 222 Allie Young Hall, or by phone at 606-783-2310.

Eagle Ready (Success Academy)

Eagle Ready is an opportunity for first-generation college students to begin their college experience early. This program continues throughout the first year and beyond to support students and help with connections to resources. The goal is to promote overall success and increased engagement.

Tutoring and Learning Center

The Tutoring and Learning Center (TLC) offers free academic assistance outside the classroom to all MSU students. Tutoring is available days, evenings and weekends. TLC peer tutors can help with individual class assignments, as well as test preparation and study skills. Tutor-led study groups are also available. To make a tutoring appointment, visit www.moreheadstate.edu/tutoring and follow the TutorTrac link.

The TLC also provides study areas for monitored study hours. Computers are available for student usage. For more information, call 606-783-2034, go to www.moreheadstate.edu/tutoring or visit the Tutoring and Learning Center in Allie Young 331 or in the commons area on the first floor of the Camden-Carroll Library.

Academic Information

General Academic Information

Academic Bankruptcy and Renewal

Academic Bankruptcy

Academic Bankruptcy (UAR 106) gives undergraduate students with an unacceptable GPA the opportunity to drop one semester's work from consideration for University academic degree requirements.

Impact: Undergraduate students who are granted bankruptcy status forfeit credit for all courses in the bankrupt semester. The grades and credit hours earned during that semester are disregarded for University requirements. The notification "academic bankruptcy" appears on the transcript beneath the semester's work. Bankruptcy cannot be revoked once it has been granted. Bankruptcy cannot be used more than once.

Eligibility: Only hours attempted at Morehead State University are considered for bankruptcy; transfer hours are excluded. The requirements for academic bankruptcy are:

1. The student must apply for bankruptcy before completing a bachelor's degree at the University.
2. The student must have attempted at least 30 semester hours at the University.
3. For the term in question, the student must have a grade point average of at least 1.0 under the cumulative average for all other hours completed at the University.

Procedure: To apply for academic bankruptcy, the student obtains an Academic Bankruptcy Form in the Office of the Registrar, 201 Ginger Hall, or by downloading the form at https://moreheadstate.edu/academics/academic-affairs/registrar/.

The student is required to meet with the appropriate academic advisor or department chair/associate dean for review of the student's Petition for Academic Bankruptcy. During this meeting, the academic advisor or department chair/associate dean carefully reviews the student's complete academic record and evaluates the appropriateness of the student's request relative to the student's current academic standing and planned future coursework. During this meeting, if the academic advisor or department chair/associate dean believes academic bankruptcy is in the best interest of the student's academic success, they will complete the form and forward it to the Office of the Registrar for verification of eligibility.

The Office of the Registrar notifies the student and the academic advisor, department chair/associate dean, or the college dean by email regarding eligibility. Appeals of the eligibility are made through the Office of Undergraduate Education and Student Success.

Academic Renewal

Academic Renewal (UAR 106) creates an opportunity for undergraduate students who are eligible to re-enroll, a means to refresh their academic record for one or more continuous semesters of previous course work at Morehead State University.

Impact: Morehead State University understands that sometimes there are circumstances that prevent students from succeeding academically. Academic Renewal is a way to help those students refresh their academic record so they can make progress toward earning their degree. Undergraduate students who are granted renewal status forfeit credit for all courses in the semester(s) included in an approved request. The grades and credit hours earned during that semester are disregarded for satisfying University requirements. The notification "academic renewal" appears on the transcript beneath each semester's work. Academic renewal cannot be revoked once it has been granted, cannot be used more than once, and cannot be granted if the student has already been approved for Academic Bankruptcy.

Eligibility: Only hours attempted at Morehead State University are considered for renewal; transfer hours are excluded. The requirements for academic renewal are:

1. The student must not have attended the University for one academic year and are eligible to be readmitted.
2. The student must be enrolled in a degree seeking program at the time of application for Academic Renewal.
3. The student must not have been approved for academic bankruptcy.

Procedure: To apply for academic renewal upon readmission to the University, the student obtains an Academic Renewal form in the Office of the Registrar or by downloading the form at https://moreheadstate.edu/academics/academic-affairs/registrar/. The student may request one or more consecutive semesters. Students may not choose semesters in which they were not enrolled consecutively.

If approved, the student is required to successfully complete 12 semester credit hours and must maintain a cumulative grade point average of at least 2.0 for those 12 semester hours. Once a student has met this requirement, their academic record will be refreshed for the semester(s) approved on their application. All course grades from the semester(s) requested will remain on the transcript, but the grades will be removed from the grade point average calculation and those courses will not count toward meeting program requirements. Any notation of academic probation or suspension will remain on the student's permanent record. Additionally, all voided hours will count as hours attempted for financial aid purposes.

The Office of the Registrar notifies the student and the academic advisor, department chair/associate dean, or the college dean by email regarding eligibility. Appeals of the eligibility ruling are made through the Office of Undergraduate Education and Student Success and follow the timeline and processes of the Academic Appeals Committee. Academic Renewal is a Morehead State University policy and may not be honored by other colleges and universities should the student decide to transfer.

Academic Calendars

Current academic calendars may be found by visiting the Office of the Registrar at www.moreheadstate.edu/academiccalendar.

Assessment

Morehead State University uses various tests and survey instruments to assess student progress and to evaluate academic programs and services. All students who are selected to participate are expected to engage in both University-wide and departmental assessment activities. For more information about requirements, contact the Testing Center, 501 Ginger Hall, 606-783-2526.

Attendance/Absence

Prompt and regular class attendance is the responsibility of all students. Students should be aware that excessive absenteeism, whether excused or unexcused, may affect their ability to earn a passing grade.

In the course syllabus, every instructor is required to provide his/her policy on class attendance, missed work, and any other related matters that could affect student performance. However, individual course attendance policies must comply with the policy outlined herein (i.e., individual course policies may not supersede those outlined below). If a student is absent from class because of a University excused absence, as identified in UAR 131, instructors are required to allow the student the opportunity to make up work missed in a fair and equitable manner without any reduction in the student's final grade as a direct result of such absence.

This policy does not supersede program accreditation requirements and as a result excludes all academic programs/courses that require the completion of a certain number of clock hours, as in clinical experiences, practica, or internships. The maximum number of absences for these courses will be determined by the program's associate dean, department chair, and/or coordinator in order for the program to maintain accreditation standards.

University excused absences are grouped into five categories: 1) University-Sponsored Activities; 2) Student/Family Illness/Death; 3) Military Obligations; 4) Jury Duty or Subpoena for Court Appearances; and 5) Major Religious Holidays. For additional information regarding excuses absences, see UAR 131 at https://moreheadstate.edu/about-msu/leadership/policies/uar.

Auditing Courses

An auditor is a student who enrolls and participates in a course without expecting to receive academic credit. The same registration procedure is followed and the same fees are charged as courses taken for credit. An audited course is not applicable to any degree. Audit enrollment will not be considered a part of the minimum number of hours required to determine full-time status or normal load. Audit enrollment will be counted in determining overload.

Regular class attendance is expected of an auditor. Other course requirements, which may be obtained in writing from the instructor, will vary depending on the nature of the course. Students interested in auditing a course should contact the instructor and discuss course requirements prior to enrolling. Failure to meet audit requirements for the course may result in the auditor being withdrawn from the course at the request of the instructor with a "WY" (Audit Withdrawal) entry made on the student's transcript. A successful audit will be recorded on the transcript with the designation "Y." Any change from audit to credit must be done by the last day to add a class. Changes from credit to audit must also be done by the last day to add a class. Refunds for withdrawals from audited courses will be prorated on the same basis as refunds for withdrawals from courses taken for credit.

Change in Schedule

Schedule changes include the following:

- Adding and dropping a course
- Changing from one course section to another
- Changing the number of credits involved in any course
- Changing from audit to credit or from credit to audit.

After the last day to drop, full-term courses may be dropped only with documented, extenuating circumstances.

Change of Program

Students who change their area/major/minor program must complete a change of program form in the dean's office of their chosen program.

Craft Academy

Morehead State University is home to the Craft Academy for Excellence in Science and Mathematics, a dual-credit residential high school for academically exceptional Kentucky students. The Craft Academy seeks to empower Kentucky's high achieving youth to create, invent and lead in STEM career fields to improve the quality of lives in Eastern Kentucky and the Commonwealth.

The Craft Academy offers a residential college experience to promote innovation and creative enterprise and meets the unique educational needs of academically talented high school juniors and seniors in the Commonwealth of Kentucky. A college-level curriculum allows students to finish high school while also completing two years of university coursework. At the end of two years, Craft Academy students will have earned a minimum of 60 college credit hours as well as their high school diploma.

Students who wish to attend the Craft Academy must meet certain requirements and apply for the program. Students are selected based on ACT/SAT scores, academic grades from their first two years of high school, interest in advanced STEM careers, responses to application essay questions, an interview by the Academy selection committee and recommendations from teachers and others who can attest to the student's preparedness for the program.

For more information, contact the Craft Academy director at 606-783-2093 or visit www.moreheadstate.edu/craft-academy.

Course Load

To view the course load policy, visit UAR 101 at https://moreheadstate.edu/about-msu/leadership/policies/uar.

Course Numbering

Courses numbered below 100 are developmental courses. These courses carry credit, which is counted in the student's load. The grade earned is computed in the student's GPA. However, credits earned **do not count** toward program or general education requirements, and they **do not count** toward the minimum hours required for graduation.

Courses may be taken only one level above a student's present classification.

To view the Course Numbering Policy, visit UAR 102 at https://moreheadstate.edu/about-msu/leadership/policies/uar.

Dean's List

To qualify for the Dean's List, students must have completed at least 12 undergraduate credit hours at Morehead State University and have earned at least a 3.5 GPA for the current semester.

To view the list, visit www.moreheadstate.edu/deanslist.

Degree Abbreviations

AA — Associate of Arts

AAS — Associate of Applied Science

BA — Bachelor of Arts

BBA — Bachelor of Business Administration

BFA — Bachelor of Fine Arts

BM — Bachelor of Music

BME — Bachelor of Music Education

BS — Bachelor of Science

BSN — Bachelor of Science in Nursing

BSW — Bachelor of Social Work

BIS — Bachelor of University Studies

Early Graduate School

A Morehead State University undergraduate student who has completed 90 or more credit hours toward the completion of the baccalaureate degree may be considered for undergraduate concurrent admission to the Graduate School to enroll in graduate coursework. To be eligible for

undergraduate concurrent admission, the student must have a cumulative undergraduate GPA of at least 3.0 at the time of admission and not be registered for more than 15 total hours. Students may earn a maximum of 12 graduate credit hours while holding undergraduate concurrent admission status.

The student must maintain a cumulative undergraduate GPA of at least 3.0 and a graduate GPA of at least 3.0 to continue in the Early Graduate School program. If the student drops below the 3.0 minimum GPA, he or she will not be allowed to continue in the program.

An application for Early Graduate School and an application for admission to the Graduate School for the specific program of interest should be initiated by the student. Admission to the Early Graduate School and the specific graduate program must be approved by the graduate dean and the program specific department representative. To be admitted to Early Graduate School, the student must be conditionally or unconditionally admitted to the specific graduate program to which they applied. A new Early Graduate School application must be completed and approved for each semester of graduate study as an Early Graduate School student.

Students who are enrolled in both undergraduate and graduate coursework may receive an adjustment to their financial aid. It is the responsibility of the student to contact the Office of Financial Aid to determine what changes may occur.

Final Examinations

Any student with more than two final examinations scheduled on any one date is entitled to have the examination for the class with the lowest catalog number rescheduled at another time during the final examination period. If a suitable arrangement cannot be made between the student and the instructor, then the next highest number may be rescheduled. In case the lowest number is shared by more than one course, the one whose department prefix is first alphabetically will be rescheduled. The option to reschedule must be exercised in writing to the appropriate instructor two weeks prior to the last class meeting.

George M. Luckey, Jr. Academic Honors Program

Dr. Philip Krummrich, Director
010 Fields Hall (basement)
150 University Blvd., UPO 665
Morehead, KY 40351
606-783-2726
https://moreheadstate.edu/student-support/academic-honors/

The George M. Luckey, Jr. Academic Honors Program is an academically enriched program that provides highly motivated students with small classes, direct and personal contact with faculty members, involvement in their research, and greater curriculum flexibility. No more than 20 students per year will be admitted to the program. Those who are admitted will receive the Honors Scholarship. This scholarship covers tuition, room and board, fees and books. Honors students will also receive up to $1,500 toward the cost of a required education abroad experience.

Students will be required to:

1. Participate in Undergraduate Research Fellowships, and to keep records of involvement in research, presentations and publications;
2. Complete four approved service projects during their four years in the program and to keep records of their activities;
3. Develop the ability to learn independently through three required experiences - self-education, honors-enhanced study and the senior honors project; and
4. Be exposed to the world beyond our national borders through the required education abroad experience.

Honors Program Requirements

1. HON 100 (one hour)
2. HON 200 (three hours)
3. HON 205 (three hours)
4. HON 210 (three hours)
5. HON 215 (three hours)
6. HON 299 (one hour)
7. HON 300 (one hour)
8. HON 490 (one hour)

Notes: HON 299, HON 300: (to be taken twice), HON 490: (maximum of 6 hours), HON 200, 205, 210 and 215 will fulfill requirements in general education. HON 200 can be completed as an alternative to the second required writing class (ENG 200). HON 205 will satisfy Knowledge: Arts and Humanities. HON 210 will satisfy Ethics and Civil Engagement: Social and Behavioral Sciences. HON 215 will satisfy one of the two required courses in Knowledge: Natural Science.

For more information or application instructions, contact the Honors Program Director, 010 Fields Hall, Morehead, KY 40351, 606-783-2205 or 606-783-2726 or visit https://moreheadstate.edu/student-support/academic-honors/. For additional scholarship information, visit www.moreheadstate.edu/scholarships.

Grades

Grades will be available on the student's Self-Service account at my.moreheadstate.edu no later than the Wednesday following the end of the term. All undergraduate students receive mid-term grades.

Marking System and Scholastic Points

The evaluation of the academic work of undergraduate students is indicated by letters as follows:

A	**Excellent —** Valued at four quality points per semester hour.
B	**Good —** Valued at three quality points per semester hour.
C	**Average —** Valued at two quality points per semester hour.
D	**Below average —** Valued at one quality point per semester hour.
E	**Failure —** No semester hours earned and no quality points. This grade is given to a student who completed the course and earned a failing grade.
I	**Incomplete —** Given only when, because of extenuating circumstances, the student cannot complete course requirements by the end of the term, but probably can do so if given an extension by one-half semester. If the course requirements are not completed by midterm of the next semester, the "I" will be changed to a failing grade. See UAR 108 for additional information.
IP	**In progress —** May **only** be assigned to 670 (Directed Research), 699 (Thesis) or 676 (Directed Study) Courses.
K	**Credit, pass-fail course —** Semester hours earned; no quality points; not computed in GPA. This grade is given when a student passes a pass-fail course.
N	**Failure, pass-fail course —** No quality points; computed in GPA and used in **undergraduate grading only**.
P	**Withdrew from school passing —** Not computed in GPA.
F	**Withdrew from school failing —** Computed in GPA as credits attempted.
R	**Course repeated —** Replaces original grade for repeated course; not computed in GPA.

U **Unofficial withdrawal —** Computed as credits attempted; computed as zero quality points in GPA calculation. Given to a student who stopped attending the course, did not complete the course and did not officially withdraw from the course.

W **Withdrew officially —** No hours attempted; not computed in GPA.

WY **Withdrawal from audit class —** Not computed in GPA.

Y **Audit credit —** No hours attempted; not computed in GPA; not applicable to degree program.

Note: The grades K and N are restricted to students who opt to take a course with a pass-fail option. The pass-fail option is restricted and applicable only to free elective courses or specific courses identified for a major or minor used for competency evaluation (i.e., those courses not required for the area, major, minor or general education requirements).

Pass-Fail

The purpose of the pass-fail option is to let you explore elective courses outside your area of specialization without engaging in grade competition with students specializing in those courses. Apply at the office of the dean of your first major by the last day to add a class.

Requirements include the following:

1. A minimum of 2.5 cumulative GPA for 30 hours earned at MSU. You are eligible as a transfer student with a minimum of 30 hours, if at least 12 hours were earned at MSU, and you have a 2.5 GPA on the work completed at MSU.
2. A maximum of 15 hours may be applied toward the total number of hours required for the bachelor's degree. Six hours may be applied toward associate degree requirements.
3. The pass-fail option is applicable only to free elective courses. These include courses not required for your area, major, minor or general education requirements.
4. Each semester you may use the pass-fail option for one course (for any number of hours of credit), or a combination of courses totaling up to three hours.
5. Hours earned in pass-fail work are added to your total hours passed but do not affect your GPA. Any grade of "D" or above is considered passing and is designated by "K." A failing grade is designated by "N."
6. You may change course registration status from pass-fail to the conventional letter grading system, and vice versa, during the normal period to add a course.
7. You cannot transfer hours earned under the pass-fail option into any degree program.
8. Your status under the pass-fail option is not identified to instructors. Instructors assign a conventional letter grade and the registrar converts the assigned letter grade to a "K" or "N," as applicable.
9. Pass-fail credit may not be applied to a second degree.

Graduating with Honors

Formal recognition is given to two-year and four-year graduates who have achieved academic excellence. Baccalaureate degree recipients who complete at least 43 hours at MSU with an institutional GPA of 3.5 to 3.69 graduate cum laude, 3.7 to 3.89 graduate magna cum laude and 3.9 to 4.0 graduate summa cum laude. Associate degree recipients who complete a minimum of 32 credit hours at MSU and earn an institutional cumulative GPA of 3.6 or better graduate with distinction. Only work completed at MSU is used in computing GPA.

Late Registration

Students are encouraged to advance register for classes according to the dates published in the academic calendar. Late registrants are assessed a $75 late registration fee and could encounter scheduling difficulties. After the scheduled enrollment period, students registering for the first time must report to the Office of Enrollment Services, 100 Admissions Center. Students returning after a period of one semester or more must reapply through the Office of Enrollment Services and register for classes in the department of their major.

MyMoreheadState

The MyMoreheadState portal is the entryway to the various online services that Morehead State University provides to students, faculty and staff.

The following information can be accessed at My.MoreheadState.edu:

1. **Access Student Account Information through Self-Service**
   - Register for course sections, pay tuition, view grades and more.
2. **Email and Online Courses**
   - Access your MSU email account as well as Blackboard, which serves as the online course delivery system.
3. **Current Events at MSU**
   - Keep tabs on MSU news, events and other important announcements.
4. **Graduate School**
   - Access student forms, virtual advising center, and program completion information.

Repeating Courses

The repeat policy was implemented to establish guidelines and procedures for repeating courses. Undergraduate students may repeat a course no more than two times. The last grade earned is the official grade for the course, even if it is lower than the previous grade. Failure a third time will result in the student not being allowed to re-enroll for that course. Students may appeal to the Office of Undergraduate Education and Student Success by emailing undergraduate@moreheadstate.edu.

Once the degree has been conferred, the academic degree is locked. Courses are not eligible to be repeated and have a previous grade replaced once the degree has been conferred. To view the policy, visit UAR 107 at https://moreheadstate.edu/about-msu/leadership/policies/uar.

Scholastic Standing

Students are eligible to register if they meet the following minimum cumulative scholastic standing. Total hours include all credits attempted at Morehead State University and transfer work. Grade point average is calculated using only MSU coursework (transfer credits are not calculated into MSU grade point average).

1. A 1.8 MSU cumulative grade point average if 24 or fewer semester hours have been attempted.
2. A 1.9 MSU cumulative grade point average if 25-36 semester hours have been attempted.
3. A 2.0 MSU cumulative grade point average if 37 or more semester hours have been attempted.

For additional information regarding Scholastic Standing, see UAR 123 at https://moreheadstate.edu/about-msu/leadership/policies/uar.

Student Classification

Classification is determined by the number of credit hours, including transfer work, successfully completed.

Freshman	0-29 hours
Sophomore	30-59 hours
Junior	60-89 hours
Senior	90 hours and above

Student Records

In accordance with the Family Educational Rights and Privacy Act (FERPA) and Morehead State University policy, non-directory information (city/state or hometown) from your official cumulative file may not be released without your written consent, except to persons engaged in the proper performance of university duties.

You also have the right to inspect, review, and challenge all official educational records, files, and data directly related to you. Request for access to such records must be made in writing to the Registrar, Morehead State University, 201 Ginger Hall.

Questions concerning this law and the University policy may be directed to the Office of the Registrar.

Terms to Know

The following are important definitions that aid understanding of this section:

An associate degree requires no fewer than 60 credit hours and can be completed in two years or less, except for the AAS in Radiologic Technology and the AAS in Veterinary Technology, which require a minimum of three years to complete.

A bachelor's or baccalaureate degree requires no fewer than 120 credit hours and can be completed in four years or less.

An area is a field of specialization requiring not less than 48 credit hours, which can be completed in place of a major-minor combination.

A major is a principal field of specialized study in which a student plans to obtain a degree. A major requires no fewer than 30 credit hours of designated coursework and must be accompanied by a minor or second major.

A minor is a secondary field of study of no fewer than 21 credit hours of designated course work.

A program of study is the major-minor combination or area that the student elects to pursue.

A teacher certification program is a state-approved course of study that leads to certification as a public school teacher.

Transcripts

Transcript Request Policy

1. Requests may be submitted online, in person, or by mail.
2. Requests by phone are not accepted.
3. Transcripts cannot be faxed.
4. Normal processing time is as few as 20 minutes for electronic transcripts ordered online and 48 business hours for all mailed and hold for pick-up transcript requests. Processing time may be longer during peak times.
5. Transcript requests for students with financial holds will not be processed. If a student has a financial hold, it must be cleared prior to placing the transcript order. If the transcript order is submitted online, the student will be notified of the financial hold and will not be able to complete the order until the hold is cleared.
6. Students who wish to pick up their transcript in the office must have a photo ID.
7. Transcript fees per copy are:
    - $15 for on-demand requests
    - $8.65 for electronic requests
    - $7.65 for mailed requests.

Request a Transcript in Person

1. Complete a transcript request form in the Registrar’s office, 201 Ginger Hall.
2. Payment is due at the time of the request. Payments are to be made in the Office of Accounting & Financial Services in 207 Howell-McDowell. Cash or check only.
3. Transcripts cannot be sent electronically from in person requests. Please submit electronic requests online through the MyMoreheadState portal or the National Student Clearinghouse.
4. You must have a photo ID to pick up a transcript.
5. Transcript fees are $7.65 per copy for mailed requests. On-demand transcript processing is available for $15 per copy.

Request a Transcript Online

Students can order their transcript securely 24/7 through the National Student Clearinghouse at www.getmytranscript.com. Students have the ability to send their transcript to any recipient of their choice including other colleges or universities, professional organizations, employers, or themselves. They also have the option to attach up to two additional document(s) to be sent along with their official transcript. Order updates will be emailed to the student. Students may also track their order online using their order number. Transcripts can be sent electronically, mailed, or held for pick-up in the Office of the Registrar.

Please note there is a field for both the student's MSU student ID number and social security number during the ordering process. However, only one is required to complete the order. If students are unsure of their exact dates of attendance, simply estimate.

Transcripts for students who attended prior to 1985 cannot be sent electronically and may only be mailed at this time.

Withdrawing from MSU

Morehead State University is committed to supporting its students in their educational endeavors. Withdrawing may not be your only option. Before submitting your withdrawal request, it is strongly recommended you do the following:

- Contact your academic advisor to discuss your withdrawal.
- Contact your financial aid counselor to discuss the financial implications of a withdrawal.
- Contact the Office of Accounting & Financial Services for questions about tuition, refunds, and your account balance.
- Contact the Office of Housing if you live in student housing.

Semester/Term Withdrawal

To officially withdraw from a semester or term, students must submit a completed withdrawal form prior to the published deadline with the Office of the Registrar. It is important for a student's academic record to reflect an official withdrawal. Entitled refunds are not made unless the withdrawal is properly recorded. If a portion of your account was paid by federal financial aid, you may have to repay a portion of these funds to the University. Please review the Return of Title IV Funds Policy for more information. Withdrawal forms can be found at www.moreheadstate.edu/academic-affairs/registrar/student-resources.

Withdrawal forms should be sent from the student's MSU email account to registrar@moreheadstate.edu. Withdrawal forms can also be mailed to:

Office of the Registrar
Morehead State University
201 Ginger Hall
Morehead, KY 40351

Medical Withdrawal Policy

A student may request and be considered for a medical withdrawal when extraordinary circumstances, such as a serious illness or injury prevent the student from continuing classes. The medical withdrawal policy covers both physical health and mental health difficulties.

A medical withdrawal can only be approved for one semester during a student's undergraduate studies. Likewise, a medical withdrawal can only be approved for one semester during a student's graduate studies.

A medical withdrawal from the University will constitute a full withdrawal from all academic classes for the requested semester. Withdrawal from courses through the regular process should be considered prior to requesting a medical withdrawal.

A request for a medical withdrawal must be filed on or before the last day of the semester involved unless the student can provide documentation to show that it was not possible to make the request within this time frame. A medical withdrawal does not dismiss students from their financial obligations with the University. Financial obligations could include tuition and fees, housing costs, outstanding fines, repayment of financial aid, telephone bills, etc.

Application for a medical withdrawal does not guarantee that a withdrawal will be granted. All medical withdrawal requests are evaluated on an individual basis. Students may apply for a medical withdrawal by following the guidelines of UAR 130.

To print the Request for Medical Withdrawal forms, visit https://moreheadstate.edu/academics/academic-affairs/students/medical-withdrawal. If you are unable to access the forms electronically or need additional assistance, contact the Office of Undergraduate Education and Student Success at 606-783-2003 or email ap@moreheadstate.edu.

Degree Information

To earn an undergraduate degree, students must meet general University requirements and specific program of study requirements. These requirements are explained in the academic programs section of this catalog. Listed below are the general University requirements for bachelor's degrees, associate degrees and second degrees.

Student Planning (My Progress)

Self-Service Student Planning enables students to better plan and register for the courses they need to complete their academic program. The My Progress feature within Student Planning (formerly known as the program evaluation) makes it easier for students to plan their current and future semesters. In addition, students can now select specific sections for their planned courses once the schedule is released. When it is time for the student to register, they will login to Self-Service and complete their registration from the main Self-Service page via a Register Now button.

Documentation on My Progress, along with a video demonstration on how to access and use these new features within Student Planning, is available at https://moreheadstate.edu/about-msu/leadership/administration/technology/account-info/self-service/. Students may also select the help button in Self-Service for help on specific features. For questions related to My Progress, contact the Office of the Registrar at registrar@moreheadstate.edu.

Bachelor's Degree Requirements

The bachelor's degree requires students to:

1. Complete a minimum of 120 credit hours of prescribed and elective college credit, 42 hours of which must be courses numbered 300 or above. See the academic programs section of this catalog for the specific requirements of the area of concentration or major and minor programs.
2. Earn a minimum cumulative GPA of 2.0 on all work completed at the University and on all work completed to satisfy area or major and minor requirements. (See academic programs for specific GPA requirements.)
3. Complete an area of no fewer than 48 credit hours or a major of no fewer than 30 credit hours and a minor of no fewer than 21 credit hours. (These are minimum requirements. Students may also elect to satisfy two majors or a major and more than one minor.)
4. A major, minor or area is not required for the Bachelor of University Studies.
5. Complete at least 30 credit hours at Morehead State University, with the last 15 hours preceding graduation earned from MSU.
6. Fifty percent of the hours required for the major or area must be credit earned at MSU. Exceptions may be made with permission of the dean of the college in which the major or area is granted.
7. Bachelor of Science candidates must complete a minimum of 60 credit hours in science or science-related fields.
8. Complete a minimum of 33 credit hours of general education courses.
9. Complete a three-credit hour FYS 101 - First Year Seminar during the first year if the student begins as a freshman or transfers to MSU with less than 24 credit hours.
10. For students with 24 or more transfer credit hours, the FYS 101 requirement is waived, but the student must complete an additional course in social and behavioral sciences to meet general education requirements.
11. A bachelor's degree and an associate degree may be applied for at the same degree date. However, no more than one associate degree will be awarded at the same date.
12. Equated courses can only be taken once for credit. If an equated course is taken a second time using the different prefix, it will be considered a repeat and the last grade received will stand.

Note: Credit earned by examination cannot exceed 30 credit hours toward a baccalaureate degree or 15 credit hours toward an associate degree.

Associate Degree Requirements

The associate degree requires students to:

1. Complete a minimum of 60 credit hours of prescribed and elective college credit. See the academic programs section of this catalog for the specific requirements of your program. A prescribed program is not required for the Associate of Arts in University Studies.
2. Earn a minimum cumulative GPA of 2.0 on all work at the University.
3. Complete at least 21 credit hours at Morehead State University, including one semester preceding graduation.
4. Complete the three-credit-hour FYS 101: First Year Seminar course during the first academic year if the student begins as a freshman or transfers to MSU with less than 24 credit hours.
5. For students with 24 or more transfer credit hours, the FYS 101 requirement is waived but the student must complete an additional course in social and behavioral sciences to meet general education requirements.
6. Complete 21 credit hours of general education requirements as follows:

General Education Courses - Associate Degree

First Year Seminar

FYS 101	First Year Seminar	3
		Subtotal: 3

Writing I (100-level)

ENG 100	Writing I	3
		Subtotal: 3

Writing II (200-level)

ENG 200	Writing II	3
		Subtotal: 3

Oral Communications (100-level)

COMS 108	Fundamentals of Speech Communication	3
		Subtotal: 3

Math Reasoning (100-level)

Choose one of the following:

MATH 123	Introduction to Statistics	3
MATH 131	General Mathematics Problem Solving	3
MATH 135	Mathematics for Technical Students	3
MATH 152	College Algebra	3
MATH 174	Pre-Calculus Mathematics	3
MATH 175	Calculus I	4
		Subtotal: 3-4

Level 2 Knowledge (SBS)

ECON 101	Introduction to Economics	3
ECON 201	Principles of Macroeconomics	3
EDF 207	Foundations of Education	3
FIN 264	Personal Finance	3
HLTH 151	Wellness: Theory to Action	3
HST 261	American History since 1865	3
POLS 100	Introduction to Politics	3
POLS 140	United States Government	3
PSY 154	Introduction to Psychology	3
SOC 101	Introduction to Sociology	3
		Subtotal: 3

Level 3 Global Cultures - Art & Humanities (HUM)

ART 263	World Arts	3
COMS 250	Introduction to Intercultural Communication	3
COMS 290	Conflict and Communication	3
FRN 101	Beginning French I	3
IST 101	Introduction to International Studies	3
IST 250	International Culture and Diversity	3
PHIL 106	Beginning Logic	3
POLS 110	Introduction to Political Theory	3
SPA 101	Spanish Language and Culture I	3
		Subtotal: 3

Subtotal: 21

Dual Program Completion

Students can now count courses across disciplines (also known as "double-dipping") in order to satisfy program requirements for dual majors or a major and a minor. General Education courses are included in the dual program completion policy.

Completion of Two Bachelor's Degrees Simultaneously

Students who wish to receive two bachelor's degrees simultaneously must satisfactorily complete the regularly prescribed requirements of both degree programs. The degree program that a student is admitted to first will be the first degree. A minimum of 30 new credit hours in residence for the second degree must be completed (e.g., if the first degree requires 120 credit hours, a total of 150 hours must be completed). No more than two bachelor's degrees may be awarded simultaneously. Final approval of both degree programs must be obtained from each of the appropriate departments and college(s).

Second Degree Requirements

If you have earned a degree from Morehead State University or any other accredited college or university, you may earn a second bachelor's degree or associate degree by completing program requirements approved by your program advisor, department chair, or associate dean. For more detailed information regarding the specific guidelines regarding this policy, visit UAR 143 at https://moreheadstate.edu/about-msu/leadership/policies/uar.

General Education Program

The general education program provides a foundation of knowledge and skills vital for all students. The curriculum provides students with the attributes needed to participate intelligently and responsibly in the discourses that shape the communities in which they live. General education is more than the acquisition of information or skills for daily life; it transcends the merely factual to raise and engage evaluative and philosophical questions. General education submits the fundamental principles and suppositions of a body of knowledge to inquiry and discussion. It challenges students to uncover and examine the assumptions under which they operate. General education aims to form in students a questioning spirit that will continue through their college career and their life as a whole and provide the grounds for development of the kind of people who can secure their own well-being while contributing to their communities, their professions and the world in which they live. Approved Student Learner Outcomes (SLOs) form the foundation for student achievement, curriculum development and program assessment.

Student Learner Outcomes (SLO)

1. Students read college-level texts for comprehension.
2. Students write effectively for a targeted college-level audience using the conventions of standard American English.
3. Students speak effectively in a variety of different contexts.
4. Students effectively apply quantitative reasoning in a variety of different contexts.
5. Students employ current research technologies in the process of locating, analyzing, evaluating, and using information.
6. Students effectively identify how important concepts, events, or people have significantly impacted forms of creative expression.
7. Students effectively examine aspects of human cultures, past or present, from a variety of perspectives.
8. Students effectively study the natural world through the use of scientific principles.
9. Students effectively examine the complex ethical/social responsibilities of American citizenship.
10. Students utilize critical thinking skills to address human problems.

General Education Requirements

Courses

Level 1 Foundations

Choose one from each category (15 hours):

First Year Seminar

FYS 101	First Year Seminar	3
		Subtotal: 3

Written Communication I

ENG 100	Writing I	3
		Subtotal: 3

Written Communication II

ENG 200	Writing II	3
HON 200	The Ancient World	3
		Subtotal: 3

Oral Communication

COMS 108	Fundamentals of Speech Communication	3
		Subtotal: 3

Mathematics

MATH 123	Introduction to Statistics	3
MATH 131	General Mathematics Problem Solving	3
MATH 135	Mathematics for Technical Students	3
MATH 152	College Algebra	3
MATH 174	Pre-Calculus Mathematics	3
MATH 175	Calculus I	4
		Subtotal: 3-4

Level 2 - Knowledge

Only one course may be chosen from each prefix in a category.

Knowledge - Natural Sciences (NSC)

Select two of the following (six hours):

AGR 185	Current Food and Energy Issues	3
ASTR 105, 112, or 125	Astronomy Elective	3
BIOL 105, 110, 155, 171, or 234	Biology Elective	3-4
CHEM 101 or 111	Chemistry Elective	4
ESS 102 or 108	ESS Elective	3-4
ETM 104 or 201	ETM Elective	3
GEO 103	Physical Geography	3
HON 215	Interdisciplinary Honors Core IV: The Modern World	3
MATH 125	Introduction to Biostatistics	3
NUTR 101	Nutrition and Well Being	3
PHYS 109	History of the Universe	3
PSY/NEUR 121	Introduction to Brain and Behavior	3
SCI/ETM/PHYS/SSE 123	Concepts & Experiences in Energy	3
SCI 104 or 111	Science Elective	3
		Subtotal: 6

Knowledge - Arts and Humanities (HUM)

Choose one of the following (three hours):

ART 160	Understanding the Visual Arts	3
ENG 120 or ENG/IST 211	English Elective	3
FLM 170	Introduction to Film	3
HON 205	Interdisciplinary Honors Core II: The Medieval World	3
HST 271 or IST 201	World History since 1500	3
MUSH 261	Global Musical Experience	3
PHIL 100	Beginning Philosophy	3
THEA 110	Introduction to Theatre	3
		Subtotal: 3

Knowledge - Social and Behavioral Sciences (SBS)

Choose one of the following (three hours):

ECON 101 or 201	Economics Elective	3
EDF 207	Foundations of Education	3
FIN 264	Personal Finance	3
HLTH 151	Wellness: Theory to Action	3
HST 261	American History since 1865	3
POLS 100 or 140	Political Science Elective	3
PSY 154	Introduction to Psychology	3
SOC 101	Introduction to Sociology	3
		Subtotal: 3

Level 3

Global Cultures - Arts and Humanities (HUM)

Choose one of the following (three hours):

ART 263	World Arts	3
COMS 250 or 290	Strategic Communication Elective	3
FRN 101	Beginning French I	3
IST 101 or 250	International Studies Elective	3
PHIL 106	Beginning Logic	3
POLS 110	Introduction to Political Theory	3
SPA 101	Spanish Language and Culture I	3
UTCH 250	Perspectives on Science and Mathematics	3
		Subtotal: 3

Ethics and Civic Engagement - Social and Behavioral Sciences (SBS)

Choose one of the following (three hours):

APS 201	Introduction to Appalachia	3
CVM 210	Media Literacy	3
GST 273	Introduction to Gender Studies	3
HON 210	Interdisciplinary Honors Core III: The Renaissance and Enlightenment World	3
LGS 200	Law and Individual Rights	3
PHIL 103	Beginning Ethics	3
POLS 177 or 262	Political Science Elective	3
SOC 203	American Social Problems	3
		Subtotal: 3

Subtotal: 33

Note: The following courses may not be used to satisfy general education requirements: Pre-100 classes, Workshops 199-499, Co-op 139-439, Practicums, Internships, Special Problems, Field Experiences, Selected Topics, Independent Study and Research Projects by Independent Study.

Graduation

Applying for Graduation

Students can apply for graduation online through their MyMoreheadState account by selecting Self-Service/Graduation Overview. Detailed instructions are available at www.moreheadstate.edu/graduation.

Applications for spring and summer terms must be completed by March 15 and applications for fall and winter terms must be completed by October 15, in order to avoid a late fee, reserve your seat at commencement, and have your name printed in the commencement program. Students will receive an email in their MSU account within 72 business hours.

Commencement is observed two times during the academic year. Ceremonies are held at the end of the fall and spring terms. For additional information regarding graduation and commencement, visit www.moreheadstate.edu/graduation or contact the Office of the Registrar at 606-783-2008 or email graduation@moreheadstate.edu.

Project Graduate

Project Graduate is a statewide collaborative effort between the Council on Post-Secondary Education (CPE) and other Kentucky colleges and universities to provide returning students with more than 80-credit hours help in finishing their degree. Students who qualify for Project Graduate are eligible for incentives such as:

- Free application
- Tuition assistance
- Priority enrollment
- Individual advising

For more information on completing your degree through Project Graduate, contact the Project Graduate liaison at j.timmermann@moreheadstate.edu or 606-783-5488.

Administrative Policies and Procedures

Academic Grievance Procedure

When a student has an academic dispute with a faculty member over a final grade, there are procedures that exist to resolve the complaint in the most satisfactory way for both the student and faculty member.

A student may file an academic grievance for the following reasons:

1. Alleged prejudice on the part of the instructor that impacts the student's final course grade.
2. Alleged failure to follow the final grading procedure established in the course syllabus that impacts student's final course grade.
3. Alleged erroneous application of established grading procedures on individual assignments that impacts student's final course grade.
4. Alleged significant departure from the instructor's, department's, program's, college's or university's announced standards as stated in the course syllabus, catalog description and/or other written materials.
5. Alleged inconsistencies with University or program policy, or alleged arbitrary application of evaluation/performance standards, that results in program dismissal.

This policy requires several steps to complete the process. For detailed information concerning the grievance policy, visit UAR 112 at https://moreheadstate.edu/about-msu/leadership/policies/uar.

The student grievance form can be found at https://moreheadstate.edu/_files/files/academics/academic-grievance-student-form.pdf. If you are unable to access the form electronically or need additional assistance, contact the Office of the Provost at 606-783-2002.

Academic Honesty Policy

Morehead State University defines academic honesty as doing one's own work, giving credit for the work of others, and using resources appropriately. Academic misconduct (i.e. academic dishonesty) occurs when a student intentionally assists or participates in cheating, plagiarism, and/or other forms of fraudulent misrepresentation of academic work.

- Cheating is the act, attempted act, or collusion to fraudulently submit academic work for a grade. It is a deception that may include (but is not limited to) using unauthorized sources of information during assessments (e.g., assignments, quizzes, examinations, etc.), possessing or distributing quizzes or examinations to others without permission, using work previously submitted for another course without instructor permission, using another person's academic work as your own, providing and/or receiving information during an assessment, falsifying experimental or laboratory data or information, having another person do your academic work or examination, providing false information in order to postpone or avoid academic work, or unauthorized collaboration with others on academic work. In an online or virtual environment, cheating also may include (but is not limited to) looking away from the screen or going off camera during an assessment, failing to conduct a full-room or workspace scan during an assessment if required, communicating with others during an assessment, using unauthorized materials or devices during an assessment, or falsifying one's identity or using fake identification documents (e.g. ID card) in a class or during an assessment, etc.
- Plagiarism is the submission of academic work, misrepresented as a student's own, that is taken from another source without credit or the appropriate attribution to the other source. Such work may include words and written work, facts and ideas that are not common knowledge, data and information, or creative works.
- Instructors may provide additional guidance about expectations for academic honesty in particular courses. Students should confer with instructors when in doubt about such expectations.

All students at Morehead State University are expected to abide by the standards of academic honesty. All allegations of academic misconduct will be adjudicated through the procedure described in UAR 145 found at https://moreheadstate.edu/_files/files/uar/uar-145-01-student-academic-misconduct.pdf.

Sexual Harassment/Sexual Misconduct Policy

Morehead State University takes seriously the rights of the campus community to be free from sexual harassment in all forms. The Board of Regents has adopted a policy prohibiting sexual harassment across the University that applies to students and employees alike. PG-6 provides detailed procedures for the reporting, investigation and resolution of all such complaints. Students and employees are urged to become familiar with the policy and to report harassment. To view the Sexual Harassment Policy, visit www.moreheadstate.edu/titleix or contact the Office of Human Resources at 606-783-2097 to request an electronic or hard copy of the policy.

Family Educational Rights and Privacy Act (FERPA)

This information is provided to notify all Morehead State University students of the rights and restrictions under the Family Educational Rights and Privacy Act of 1974 (Public Law 93-380) as amended. FERPA is also known as the "Buckley Amendment."

Notification of Rights under FERPA for Postsecondary Institutions

The Family Educational Rights and Privacy Act (FERPA) afford eligible students certain rights with respect to their education records. (An "eligible student" under FERPA is a student who is 18 years of age or older or who attends a postsecondary institution.) These rights include:

The right to inspect and review the student's education records

The eligible student has the right to inspect and review the student's education records within 45 days after the day Morehead State University receives a request for access. A student should submit to the registrar, dean, head of the academic department, or other appropriate official, a written request that identifies the record(s) the student wishes to inspect. The school official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the school official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

The right to file a complaint

The eligible student has the right to file a complaint with the U.S. Department of Education concerning alleged failures by Morehead State

University to comply with the requirements of FERPA. To file a complaint, the student should contact the Family Policy Compliance Office at the following address:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

The right to provide written consent before the University discloses personally identifiable information

The eligible student has the right to provide written consent before the University discloses personally identifiable information (PII) from the student's education records, except to the extent that FERPA authorizes disclosure without consent.

The school discloses education records without a student's prior written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official is a person employed by Morehead State University in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel and health staff); a person serving on the board of regents; or a student serving on an official committee, such as a disciplinary or grievance committee. A school official also may include a volunteer or contractor outside of Morehead State University who performs an institutional service of function for which the school would otherwise use its own employees and who is under the direct control of the school with respect to the use and maintenance of PII from education records, such as an attorney, auditor, collection agent, a hosted software company or a verification agency.

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the University.

The right to request the amendment of the student's education records

The eligible student has the right to request the amendment of the student's education records that the student believes is inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA.

A student who wishes to ask the school to amend a record should write the school official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed.

If the school decides not to amend the record as requested, the school will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

Informal Proceedings: Morehead State University may attempt to settle a dispute with the parent of a student or the eligible student regarding the content of the student's education records through informal meetings and discussions with the parent or eligible student.

Formal Proceedings: Upon the request of either party (the educational institution, the parent or eligible student), the right to a hearing is required. If a student, parent or educational institution requests a hearing, the Provost or his/her designee shall make the necessary arrangements. The hearing will be established according to the procedure delineated by the University.

Release of Directory Information

FERPA defines "directory information" as information contained in the education records of a student that would not generally be considered harmful or an invasion of privacy if disclosed. Typically, "directory information" includes information such as:

- Name,
- City/state or hometown,
- Telephone listing,
- E-mail,
- Major field of study,
- Dates of attendance,
- Enrollment status (e.g. undergraduate or graduate, full-time or part-time),
- Participation in officially recognized activities and sports,
- Weight and height of members of athletic teams,
- Degrees, honors and awards received, and
- Most recent educational agency or institution attended.

The release of the above-noted information by an educational agency or institution is permitted under the law unless the student notifies the institution or agency in person that he/she does not want such information released. Eligible students may withhold directory information by notifying the Office of the Registrar, 201 Ginger Hall, or by calling 606-783-2008.

Requests for non-disclosure will remain in effect until the eligible student informs the Office of the Registrar to remove the disclosure restriction.

Disclosure of Information

FERPA permits the disclosure of personally identifiable information (PII) from students' education records, without consent of the student, if the disclosure meets certain conditions found in §99.31 of the FERPA regulations. Except for disclosures to school officials, disclosures related to some judicial orders or lawfully issued subpoenas, disclosures of directory information, and disclosures to the student, §99.32 of FERPA regulations requires the institution to record the disclosure. Eligible students have a right to inspect and review the record of disclosures. A postsecondary institution may disclose PII from the education records without obtaining prior written consent of the student -

- To other school officials, including teachers, within Morehead State University whom the school has determined to have legitimate educational interests. This includes contractors, consultants, volunteers, or other parties to whom the school has outsourced institutional services or functions, provided that the conditions listed in §99.31(a)(1)(i)(B)(1) - (a)(1)(i)(B)(2) are met. (§99.31(a)(1))
- To officials of another school where the student seeks or intends to enroll, or where the student is already enrolled if the disclosure is for purposes related to the student's enrollment or transfer, subject to the requirements of §99.34. (§99.31(a)(2))
- To authorized representatives of the U. S. Comptroller General, the U. S. Attorney General, the U.S. Secretary of Education, or state and local educational authorities, such as a state postsecondary authority that is responsible for supervising the University's state-supported education programs. Disclosures under this provision may be made, subject to the requirements of §99.35, in connection with an audit or evaluation of federal- or state-supported education programs, or for the enforcement of or compliance with federal legal requirements that relate to those programs. These entities may make further disclosures of PII to outside entities that are designated by them as their authorized representatives to conduct any audit, evaluation, or enforcement or compliance activity on their behalf. (§§99.31(a)(3) and 99.35)
- In connection with financial aid for which the student has applied or which the student has received, if the information is necessary to determine eligibility for the aid, determine the amount of the aid,

determine the conditions of the aid, or enforce the terms and conditions of the aid. (§99.31(a)(4))

- To organizations conducting studies for, or on behalf of, the school, in order to: (a) develop, validate, or administer predictive tests; (b) administer student aid programs; or (c) improve instruction. (§99.31(a)(6))
- To accrediting organizations to carry out their accrediting functions. ((§99.31(a)(7))
- To comply with a judicial order or lawfully issued subpoena. (§99.31(a)(9))
- To appropriate officials in connection with a health or safety emergency, subject to §99.36. (§99.31(a)(10))
- Information the school has designated as "directory information" under §99.37. (§99.31(a)(11))
- To a victim of an alleged perpetrator of a crime of violence or a non-forcible sex offense, subject to the requirements of §99.39. The disclosure may only include the final results of the disciplinary proceeding with respect to that alleged crime or offense, regardless of the finding. (§99.31(a)(13))
- To the general public, the final results of a disciplinary proceeding, subject to the requirements of §99.39, if the school determines the student is an alleged perpetrator of a crime of violence or non-forcible sex offense and the student has committed a violation of the school's rules or policies with respect to the allegation made against him or her. (§99.31(a)(14))
- To parents of a student regarding the student's violation of any federal, state, or local law, or of any rule or policy of the school, governing the use or possession of alcohol or a controlled substance if the school determines the student committed a disciplinary violation and the student is under the age of 21. (§99.31(a)(15))

Open Records Request

Morehead State University is a public agency operating in compliance with the Kentucky Open Records Act, KRS 61.870 to 61.884. University Administrative Regulation (UAR) 901.04 sets forth the University's regulations governing inspection of the public records of Morehead State University.

All requests for open records shall be made to the Office of General Counsel, the official custodian of the public records of Morehead State University, by hand-delivering, mailing, faxing, or emailing said request to the following:

Office of General Counsel
Morehead State University
305 Howell-McDowell Administration Building
150 University Boulevard
Morehead, Kentucky. 40351
Phone: 606-783-2053
Fax: 606-783-9153
Email: OpenRecordsRequest@moreheadstate.edu

Requesting parties must submit a written request for records, describing the records being requested and including the name and signature of the requesting party and a statement that the party is a resident of the Commonwealth of Kentucky, as defined by KRS 61.870(10). A requesting party can elect to use the open records request form provided by the Office of the Attorney General, but use of the form is not required. The form can be found by visiting: https://ag.ky.gov/Documents/2021_Standardized_Open_Records_Request_Form_V3.pdf.

Caudill College of Arts, Humanities and Social Sciences

Dr. Sylvia Henneberg, Interim Dean
212 Rader Hall
Morehead, KY 40351
Phone: 606-783-5288
ccahss@moreheadstate.edu
https://moreheadstate.edu/academics/colleges/humanities/

Communication, Media, Art & Design Department

Jeffrey Hill, Chair
211A Claypool-Young
Morehead, KY 40351
Phone: 606-783-9383
cmad@moreheadstate.edu

Communication & Media

Communication & Media Faculty
L. Albert (Faculty Emeritus), A. Andaloro, N. Brock, T. Creekmore, J. Flavell, M. Getchell, J. Hill, F. Jia, R. Manis, C. Merritt, S. Middleton, J. Modaff (Faculty Emeritus), D. Murray

Media Production and Journalism Area - Bachelor of Arts

Program Competencies

Students will demonstrate:

1. The ability to communicate professionally in written, oral and visual forms.
2. The ability to select media and apply appropriate technology for the dissemination of communication content.
3. The ability to critically analyze and evaluate communication sources and content.
4. Knowledge of the legal and ethical rights and responsibilities of media content providers serving diverse populations.

Assessment

1. Capstone portfolio

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Media Production

ART 109	Digital Foundations	3
CVM 110	History of Communication Media	3
CVM 140	Field Production Practices	3
CVM 201	Media Writing	3
CVM 250	Content Gathering Techniques	3
CVM 492	Media Law and Ethics	3
CVM 499C	Senior Seminar Convergent Media	3
CVM 177, 277, 377, or 477	Convergent Media Practicum	3
COMS 347 or 447	Internship	1
		Subtotal: 25

Media Production Electives

Choose six hours (two courses) from the following:

CVM 205	Introduction to Photojournalism	3
CVM 301	News Writing and Reporting	3
CVM 305	Documentary Photography	3
CVM 320	Feature and Documentary Writing	3
CVM 401	Advanced Multimedia News	3
CVM 465	Opinion Writing	3
		Subtotal: 6

Choose six hours (two courses) from the following:

CVM 240	Elements of Studio Production I	3
CVM 321	Editing Tools and Techniques	3
CVM 331	Corporate Video Production	3
CVM 340	Studio Practices	3
CVM 350	Audio Production and Direction	3
CVM 481	Documentary Production	3
CVM 483	Animation Production	3
CVM 485	Narrative Video Production	3
		Subtotal: 6

Choose three hours (one course) from the following:

ART 100	2D Design and Color Foundations	3
ART 206	Websites I	3
ART 309	Computer Art	3
ART 410	Motion Graphics	3
		Subtotal: 3

Choose three hours (one course) from the following:

CVM 452	Issues in Contemporary Media	3
CVM 454	Popular Culture Analysis	3
CVM 462	Media Criticism	3
		Subtotal: 3

Choose six hours (two courses) from the above options:

Students may choose from any of the above for the remainder of electives. CVM 399 may be used as a CVM elective. It may be used more than once if the course is a different topic.

Subtotal: 6

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Students must complete a minimum of three hours of Practicum at three different levels (CVM 177, 277, 377, or 477). Students may repeat each practicum for a maximum of eight hours. Any practicum hours beyond three will count toward university elective hours.

Total Credit Hours: 120

Strategic Communication Area – Bachelor of Arts

Program Competencies

Students will:

1. Demonstrate critical thinking when developing and responding to strategic messages.
2. Apply key concepts and theories of strategic communication.
3. Demonstrate mastery of written, oral, visual and mediated strategic communication.
4. Identify and apply concepts of ethical strategic communication.
5. Demonstrate strategic communication skills needed for responsible team leadership and participation.
6. Demonstrate abilities to treat conflict creatively through mediation and negotiation.

Assessment

1. Senior Project in Capstone Course

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Strategic Communication

COMS 100	Introduction to Strategic Communication	3
COMS 110	Strategic Messaging	3
COMS 200	Strategic Communication Research	3
COMS 250	Introduction to Intercultural Communication	3
COMS 290	Conflict and Communication	3
COMS 300	Strategic Organizational Leadership	3
COMS 330	Argumentation and Persuasion	3
COMS 347 or 447	Internship	3
COMS 499C	Senior Seminar in Communication	3

Subtotal: 27

Strategic Communication Electives

Skills and Experience

Choose nine hours (three courses) from the following:

COMS 310	Professional Presentations and Speech Writing	3
COMS 340	Event Planning and Public Relations	3
COMS 383	Facilitating Team Communication	3
COMS 400	Interviewing	3
CVM 201	Media Writing	3

Subtotal: 9

Critical Thinking

Choose six hours (two courses) from the following:

COMS 350	Communication, Culture and Diversity	3
COMS 420	Analysis of Persuasion	3
CVM 464	Public Opinion and the Media	3
CVM 492	Media Law and Ethics	3

Subtotal: 6

Public Relations

Choose nine hours (three courses) from the following:

COMS 333	Social Media and Community	3
COMS 370	Communication and Health	3
COMS 382	Public Relations Principles	3
COMS 405	Communication Issue Management	3
COMS 482	Public Relations Campaigns	3

Subtotal: 9

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

COMS 347 or 447: Experiential learning is required in the core. No more than three credit hours for internship experiences can count towards the 48 credits required for the area. Additional internship credit will count towards general electives.

Total Credit Hours: 120

Film Studies Minor

The film studies minor is an interdisciplinary program of study designed to give students a theoretical as well as practical knowledge of film. It recognizes the importance of film literacy in the digital age and offers students the critical skills they will need to productively engage with the mass-mediated world of the 21st century.

Film Studies Minor Requirements

Core Requirements

CVM 140	Field Production Practices	3
FLM 170	Introduction to Film	3
FLM 270	Film History	3
FLM 470	Film Theory	3

Subtotal: 12

Electives

Choose nine hours (three courses) from the following:

CVM 320	Feature and Documentary Writing	3
CVM 481	Documentary Production	3
CVM 483	Animation Production	3
CVM 485	Narrative Video Production	3
ENG 470	Film and Literature	3
FLM 399	Special Topics	3
SPA 309	Explorations in Hispanic Cinema Analysis	3
THEA 284	Acting Techniques	3

Subtotal: 9

FLM 399 may be taken more than once for credit if topic varies.

Note: No prerequisite is required for CVM 320, CVM 481, CVM 485 or SPA 309 if taken as part of the film studies minor.

Total Credit Hours: 21

Photography Minor

Photography Minor Requirements

Core Requirements

ART 109	Digital Foundations	3
CVM 205	Introduction to Photojournalism	3
ART 373	Basic Black and White Photography	3
ART 375	Introduction to Digital Photography	3
ART 474	Photo Studio	3

Subtotal: 15

Electives

Choose six hours (two courses) from the following:

ART 309	Computer Art	3
ART 473	35MM Photography	3
ART 475	Large Format Photography	3
CVM 140	Field Production Practices	3
CVM 305	Documentary Photography	3

Subtotal: 6

Total Credit Hours: 21

Public Relations and Event Planning Minor

Public Relations and Event Planning Minor Requirements

Core Requirements

COMS 110	Strategic Messaging	3
COMS 200	Strategic Communication Research	3
COMS 340	Event Planning and Public Relations	3
COMS 382	Public Relations Principles	3
COMS 482	Public Relations Campaigns	3
		Subtotal: 15

Electives

Choose six hours (two courses) from the following:

COMS 300	Strategic Organizational Leadership	3
COMS 310	Professional Presentations and Speech Writing	3
COMS 333	Social Media and Community	3
COMS 350	Communication, Culture and Diversity	3
COMS 370	Communication and Health	3
COMS 383	Facilitating Team Communication	3
COMS 400	Interviewing	3
COMS 405	Communication Issue Management	3
COMS 420	Analysis of Persuasion	3
		Subtotal: 6

Total Credit Hours: 21

Social Media Minor

The purpose of the social media minor is to prepare students for opportunities to use social media as part of strategic messaging and marketing campaigns for many entities such as service groups, volunteer organizations, for-profit companies, public relations and advertising agencies, and many others as well.

Social Media minors will:

1. Be able to communicate professionally in written, oral and visual forms.
2. Demonstrate creative skills in social media production.
3. Be able to select social media channels and apply appropriate technology for the dissemination of strategic communication content.
4. Have knowledge of the legal and ethical rights and responsibilities of social media content providers serving diverse populations.
5. Demonstrate critical and strategic thinking when developing and responding to social media messages.
6. Demonstrate strategic communication skills needed for responsible team leadership and participation in social media endeavors.

Social Media Minor Requirements

Core Requirements

COMS 110	Strategic Messaging	3
COMS 333	Social Media and Community	3
COMS 382	Public Relations Principles	3
CVM 140	Field Production Practices	3
CVM 201	Media Writing	3
CVM 410	Social Media Strategies	3
CVM 492	Media Law and Ethics	3

Total Credit Hours: 21

Strategic Communication and Leadership Minor

Strategic Communication and Leadership Minor Requirements

Core Requirements

COMS 100	Introduction to Strategic Communication	3
COMS 300	Strategic Organizational Leadership	3
COMS 310	Professional Presentations and Speech Writing	3
COMS 330	Argumentation and Persuasion	3
COMS 383	Facilitating Team Communication	3
		Subtotal: 15

Electives

Choose six hours (two courses) from the following:

COMS 333	Social Media and Community	3
COMS 340	Event Planning and Public Relations	3
COMS 350	Communication, Culture and Diversity	3
COMS 370	Communication and Health	3
COMS 382	Public Relations Principles	3
COMS 400	Interviewing	3
COMS 405	Communication Issue Management	3
COMS 420	Analysis of Persuasion	3
COMS 482	Public Relations Campaigns	3
		Subtotal: 6

Total Credit Hours: 21

Art & Design

Art & Design Faculty

R. Bowen, R. Franzini (Faculty Emeritus), J. Gritton, S. Hawkins, D. Li, E. Mesa-Gaido, G. Mesa-Gaido, R. Moore, J. Petsch

Art Area – Bachelor of Fine Arts

Special Admission Requirements

1. Students will apply during a range of 21-36 credit hours in art course work, and must have completed (or be enrolled in and in good standing in) the following courses the semester they are applying to the BFA program:
   a. Four Art Core courses (12 credit hours)
      i. ART 100 - 2D Design and Color Foundations
      ii. ART 102 - 3D Foundations
      iii. ART 109 - Digital Foundations
      iv. ART 112 - Drawing Foundations
   b. One of the following survey courses (3 credit hours)
      i. ART 263 - World Arts
      ii. ART 264 - Ancient-Medieval
      iii. ART 265 - Renaissance-Modern
   c. Two studio and/or design courses beyond the Art Core (6 credit hours)
2. Students must have achieved (and must maintain if accepted into the BFA program) an Art GPA of 3.0, and an overall GPA of 2.5 to apply for admission and submit work for Portfolio Application Review. Students will no longer be able to apply for admittance into the BFA program once they have surpassed a maximum of 36 credit hours in Art and Design coursework.
3. To apply for admission, students submit a Portfolio Application. Portfolios are reviewed twice a year by faculty (once in the fall semester, once in the spring).
4. Transfer students admitted into the BFA program complete a minimum of two semesters at MSU prior to graduating.
5. Students of sophomore rank participate in the Sophomore Exhibition and Review in the spring semester.
6. BFA students of senior rank participate in the Senior Exhibition in the spring semester.
7. BFA students of senior rank participate in the BFA Exhibition in the spring semester.

8. Seniors produce resumes and digital portfolios in Visual Art Capstone (ART 499C).
9. Transfer students must comply with the intent of these requirements on an individually evaluated basis. Following admission into the BFA program, a minimum of two semesters at MSU must be completed prior to graduation.
10. A total of 12 hours from Advanced Study art courses are allowable towards the degree.
11. A total of 12 hours from Internship courses are allowable towards the degree.
12. Completion of ART 435 - Advanced BFA Studio/Design Studies (One credit hour).

Program Competencies

Students will:

1. Understand and skillfully apply various media, techniques and technology in the production and presentation of art work.
2. Work creatively with materials, media, symbols and ideas.
3. Understand visual art and design in historical, philosophical and cultural contexts.
4. Reflect upon and assess the characteristics and merits of their work and the work of others.
5. Communicate about art effectively in written and oral form.
6. Develop competencies in preparation for work as artists, designers, teachers and creative workers in the 21st century.

Assessment

1. BFA Portfolio Application reviewed by faculty.
2. Completion of the Advanced BFA Studio/Design Studies course (ART 435).
3. Sophomore Exhibition Mid-Program Assessment.
4. Senior Exhibition Assessment
5. BFA Exhibition Assessment.
6. Completion of the senior survey in the Visual Arts Capstone course.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Art Core Requirements

ART 100	2D Design and Color Foundations	3
ART 102	3D Foundations	3
ART 109	Digital Foundations	3
ART 112	Drawing Foundations	3
ART 214	Painting Techniques I	3
ART 295	Sophomore Exhibition and Review	0
ART 304	Drawing II	3
ART 435	Advanced BFA Studio/Design Studies	1
ART 490	Senior Exhibition	0
ART 495	BFA Exhibition	0
ART 499C	Visual Art Capstone	3
		Subtotal: 22

Choose two of the following:

ART 263	World Arts	3
ART 264	Ancient-Medieval	3
ART 265	Renaissance-Modern	3
		Subtotal: 6

Choose one of the following:

ART 245	Ceramics I	3
ART 294	Sculpture I	3
		Subtotal: 3

Choose one of the following:

ART 351	Intaglio Printmaking	3
ART 352	Lithographic Printmaking	3
ART 373	Basic Black and White Photography	3
		Subtotal: 3

ART History

Choose two 300-level or higher electives from the following:

ART 361	Ancient Art	3
ART 362	Medieval Art	3
ART 363	Renaissance Art	3
ART 364	Mannerist and Baroque Art	3
ART 461	18th and 19th Century European and U.S. Art	3
ART 462	20th Century Art	3
ART 463	Art of the United States	3
ART 464	Spanish, Portuguese and Latin American Art	3
ART 467	Native American Art	3
ART 468	Appalachian Arts	3
ART 481	German Art of the 20th Century	3
ART 482	Contemporary World Art	3
		Subtotal: 6

ART electives

ART electives	Choose 24 hours from ART	24
		Subtotal: 24

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Art Major – Bachelor of Arts

Special Program Requirements

1. Students of sophomore rank participate in the Sophomore Exhibition and Review in the spring semester.
2. Students of senior rank participate in the Senior Exhibition in the spring semester.
3. Seniors produce resumes and digital portfolios in the Visual Art Capstone course.
4. A total of 12 hours from Advanced Study art courses are allowable towards the degree.
5. A total of 12 hours from Internship courses are allowable towards the degree.

Program Competencies

Students will:

1. Understand and skillfully apply various media, techniques and technology in the production and presentation of their work.
2. Work creatively with materials, media, symbols and ideas.
3. Understand visual art and design in historical, philosophical and cultural contexts.
4. Reflect upon and assess the characteristics and merits of their work and the work of others.
5. Communicate about art effectively in written and oral form.

6. Develop competencies in preparation for work as artists, designers, teachers and creative workers in the 21st century.

Assessment

1. Sophomore Exhibition Mid-Program Assessment
2. Senior Exhibition Assessment
3. Completion of the Senior Survey in the Visual Arts Capstone course.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

Art Core Requirements

ART 100	2D Design and Color Foundations	3
ART 102	3D Foundations	3
ART 109	Digital Foundations	3
ART 112	Drawing Foundations	3
ART 214	Painting Techniques I	3
ART 295	Sophomore Exhibition and Review	0
ART 490	Senior Exhibition	0
ART 499C	Visual Art Capstone	3
		Subtotal: 18

Choose two of the following:

ART 263	World Arts	3
ART 264	Ancient-Medieval	3
ART 265	Renaissance-Modern	3
		Subtotal: 6

Choose one of the following:

ART 245	Ceramics I	3
ART 294	Sculpture I	3
		Subtotal: 3

Choose one of the following:

ART 351	Intaglio Printmaking	3
ART 352	Lithographic Printmaking	3
ART 373	Basic Black and White Photography	3
		Subtotal: 3

ART History

Choose one 300-level or higher elective from the following:

ART 361	Ancient Art	3
ART 362	Medieval Art	3
ART 363	Renaissance Art	3
ART 364	Mannerist and Baroque Art	3
ART 461	18th and 19th Century European and U.S. Art	3
ART 462	20th Century Art	3
ART 463	Art of the United States	3
ART 464	Spanish, Portuguese and Latin American Art	3
ART 467	Native American Art	3
ART 468	Appalachian Arts	3
ART 481	German Art of the 20th Century	3
ART 482	Contemporary World Art	3
		Subtotal: 3

ART electives

ART electives	Choose 6 hours from ART	6
		Subtotal: 6

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Art Teaching

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Art Area Teaching – Bachelor of Fine Arts

BFA Admission Requirements

1. Students will apply during a range of 21-36 credit hours in art course work and must have completed (or be enrolled in and in good standing in) the following courses the semester they are applying to the BFA program:
   a. Four Art Core courses (12 credit hours)
      i. ART 100 - 2D Design and Color Foundations
      ii. ART 102 - 3D Foundations
      iii. ART 109 - Digital Foundations
      iv. ART 112 - Drawing Foundations
   b. One of the following survey courses (3 credit hours)
      i. ART 263 - World Arts
      ii. ART 264 - Ancient-Medieval
      iii. ART 265 - Renaissance-Modern
   c. Two studio and/or design courses beyond the art core (6 credit hours)
2. Students must have achieved (and must maintain if accepted into the BFA program) an Art GPA of 3.0, and an overall GPA of 2.5 to apply for admission and submit work for Portfolio Application Review. Students will no longer be able to apply for admittance into the BFA program once they have surpassed a maximum of 36 credit hours in Art and Design coursework.
3. To apply for admission, students submit a Portfolio Application. Portfolios are reviewed twice a year by faculty (once in the fall semester, once in the spring).
4. Transfer students admitted into the BFA program complete a minimum of two semesters at MSU prior to graduating.
5. Students of sophomore rank participate in the Sophomore Exhibition and Review in the spring semester.
6. BFA students of senior rank participate in the Senior Exhibition in the spring semester.
7. BFA students of senior rank participate in the BFA Exhibition in the spring semester.
8. Seniors produce resumes and digital portfolios in Visual Art Capstone (ART 499C).
9. Transfer students must comply with the intent of these requirements on an individually evaluated basis. Following admission into the BFA

program, a minimum of two semesters at MSU must be completed prior to graduation.

10. A total of 12 hours from Advanced Study art courses are allowable towards the degree.
11. A total of 12 hours from Internship courses are allowable towards the degree.
12. Completion of ART 435 - Advanced BFA Studio/Design Studies (One credit hour).

TEP Admission Requirements

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of "C" or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

**Art Education students must be admitted to the Teacher Education Program (TEP) prior to enrolling in ART 301, ART 321, EDSE 312, EDSE 416, EDSE 483, and EDUC 476.*

Program Competencies

Students will be able to:

1. Understand and skillfully apply various media, techniques and technology in the production and presentation of their work.
2. Work creatively with materials, media, symbols and ideas.
3. Understand visual art and design in historical, philosophical and cultural contexts.
4. Reflect upon and assess the characteristics and merits of their work and the work of others.
5. Communicate about art effectively in written and oral form.
6. Develop competencies in preparation for work as artists, designers, teachers and creative workers in the 21st century.

Assessment

1. BFA Portfolio Application reviewed by faculty.
2. Completion of the Advanced BFA Studio/Design Studies course (ART 435).
3. Sophomore Exhibition Mid-Program Assessment
4. Senior Exhibition Assessment
5. BFA Exhibition Assessment
6. Completion of the senior survey in the Visual Arts Capstone course.
7. Teacher certification students will take the Praxis II art content exam.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Art Teaching

Art Core Requirements

ART 100	2D Design and Color Foundations	3
ART 102	3D Foundations	3
ART 109	Digital Foundations	3
ART 112	Drawing Foundations	3
ART 499C	Visual Art Capstone	3
		Subtotal: 15

Studio Courses

ART 214	Painting Techniques I	3
ART 295	Sophomore Exhibition and Review	0
ART 300	Teaching Elementary and Middle School Art	3
ART 304	Drawing II	3
ART 321	Materials and Methods for Secondary Art*	3
ART 435	Advanced BFA Studio/Design Studies	1
ART 490	Senior Exhibition	0
ART 495	BFA Exhibition	0
		Subtotal: 13

Note: ART 300 is offered during the second semester of the second year due to teacher education course sequencing. This is the only art education course offered that does not require TEP admission and allows students to participate in field experience in their content area.

Choose two of the following:

ART 263	World Arts	3
ART 264	Ancient-Medieval	3
ART 265	Renaissance-Modern	3
		Subtotal: 6

Choose one of the following:

ART 245	Ceramics I	3
ART 294	Sculpture I	3
		Subtotal: 3

Choose one of the following:

ART 351	Intaglio Printmaking	3
ART 352	Lithographic Printmaking	3
ART 373	Basic Black and White Photography	3
		Subtotal: 3

Art History

Choose two 300-level or higher electives from the following:

ART 361	Ancient Art	3
ART 362	Medieval Art	3
ART 363	Renaissance Art	3
ART 364	Mannerist and Baroque Art	3
ART 461	18th and 19th Century European and U.S. Art	3
ART 462	20th Century Art	3
ART 463	Art of the United States	3
ART 464	Spanish, Portuguese and Latin American Art	3
ART 467	Native American Art	3
ART 468	Appalachian Arts	3
ART 481	German Art of the 20th Century	3
ART 482	Contemporary World Art	3
		Subtotal: 6

Art Electives

ART electives	Choose 18 hours from ART	18
		Subtotal: 18

Professional Education

ART 301	Field Experience in Art Education*	3
EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDSE 312	Educational Methods and Technology*	3
EDSE 416	Clinical Practice*	12
EDSE 483	Classroom Organization and Management for Secondary Teachers*	3
EDSP 230	Education of Exceptional Children	3
EDUC 476	Content Area Literacy*	3
		Subtotal: 33

Total Credit Hours: 121

Art Area Teaching – Bachelor of Arts

Art Area Teaching (BA) Admission Requirements

1. Sophomore Exhibition and Faculty Review (spring semester)
2. Senior Exhibition (spring semester)

TEP Admission Requirements

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

**Art Education students must be admitted to the Teacher Education Program (TEP) prior to enrolling in ART 301, ART 321, EDSE 312, EDSE 416, EDSE 483, and EDUC 476.*

Program Competencies

Students will:

1. Understand and skillfully apply various media, techniques and technology in the production and presentation of their work.
2. Work creatively with materials, media, symbols and ideas.
3. Understand visual art and design in historical, philosophical, and cultural contexts.
4. Reflect upon and assess the characteristics and merits of their work and the work of others.
5. Communicate about art effectively in written and oral form.
6. Develop competencies in preparation for work as artists, designers, teachers, and creative workers in the 21st century.

Assessment

1. Sophomore Exhibition Mid-Program Assessment
2. Senior Exhibition Assessment
3. Completion of the senior survey in the Visual Arts Capstone course.
4. Teacher certification students will take the Praxis II art content exam.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Art Teaching

Art Core Requirements

ART 100	2D Design and Color Foundations	3
ART 102	3D Foundations	3
ART 109	Digital Foundations	3
ART 112	Drawing Foundations	3
ART 214	Painting Techniques I	3
ART 295	Sophomore Exhibition and Review	0
ART 300	Teaching Elementary and Middle School Art	3
ART 304	Drawing II	3
ART 321	Materials and Methods for Secondary Art*	3
ART 490	Senior Exhibition	0
ART 499C	Visual Art Capstone	3

Subtotal: 27

Note: ART 300 is offered during the second semester of the second year due to teacher education course sequencing. This is the only art education course offered that does not required TEP admission and allows students to participate in field experience in their content area.

Choose two of the following:

ART 263	World Arts	3
ART 264	Ancient-Medieval	3
ART 265	Renaissance-Modern	3

Subtotal: 6

Choose one of the following:

ART 245	Ceramics I	3
ART 294	Sculpture I	3

Subtotal: 3

Choose one of the following:

ART 351	Intaglio Printmaking	3
ART 352	Lithographic Printmaking	3
ART 373	Basic Black and White Photography	3

Subtotal: 3

Art History

Choose two 300-level or higher Art History electives from the following:

ART 361	Ancient Art	3
ART 362	Medieval Art	3
ART 363	Renaissance Art	3
ART 364	Mannerist and Baroque Art	3
ART 461	18th and 19th Century European and U.S. Art	3
ART 462	20th Century Art	3
ART 463	Art of the United States	3
ART 464	Spanish, Portuguese and Latin American Art	3
ART 467	Native American Art	3
ART 468	Appalachian Arts	3
ART 481	German Art of the 20th Century	3
ART 482	Contemporary World Art	3

Subtotal: 6

Art Electives

ART electives	Choose 12 hours from ART	12

Subtotal: 12

Professional Education

ART 301	Field Experience in Art Education*	3
EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDSE 312	Educational Methods and Technology*	3
EDSE 416	Clinical Practice*	12
EDSE 483	Classroom Organization and Management for Secondary Teachers*	3
EDSP 230	Education of Exceptional Children	3
EDUC 476	Content Area Literacy*	3

Subtotal: 33

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Note: A total of 12 hours from advanced studies art courses are allowable toward the degree. A total of 12 hours from internship courses are allowable toward the degree.

Art History Minor

Art History Minor Requirements

Core Requirements

ART 100	2D Design and Color Foundations	3
ART 109	Digital Foundations	3
ART 263	World Arts	3
ART 264	Ancient-Medieval	3
ART 265	Renaissance-Modern	3

Subtotal: 15

Electives

ART Electives	Choose two 300-level or higher electives	6

Subtotal: 6

Total Credit Hours: 21

Arts Entrepreneurship Minor

Arts Entrepreneurship Minor Requirements

Core - Take seven hours

ART 200	Introduction to Arts Administration	3
ART 201	Arts Entrepreneurship	3
ART 307	Arts Administration and Entrepreneurship Practicum	1

Subtotal: 7

Management - Take six hours

MNGT 201	Principles of Management	3
MNGT 310	Small Business Organization	3
MNGT 417	Management and Marketing of Public and Nonprofit Organizations	3
BBA 350	Business Plan Development	3
BBA 475	Leadership Development	3
POLS 351	Public Administration	3
POLS 353	Public Personnel Administration	3
POLS 451	Seminar in Bureaucracy and Public Management	3

Subtotal: 6

Legal Issues - Take three hours

BBA 261	Business Law and Regulations	3
MNGT 362	The Legal Environment and Business Practices	3
CVM 492	Media Law and Ethics	3

Subtotal: 3

Finance and Business - Take two hours (minimum)

ACCT 281	Principles of Financial Accounting	3
MNGT 101	Reel Business	3
MUSW 310	Music Business	2

Subtotal: 2-3

Marketing and Communication - Take three hours

ART 109	Digital Foundations	3
ART 333	Design Layout and Pre-Press	3
COMS 110	Strategic Messaging	3

COMS 300	Strategic Organizational Leadership	3
COMS 340	Event Planning and Public Relations	3
COMS 382	Public Relations Principles	3
MKT 204	Marketing	3
MKT 345	Marketing Strategies for Small Business	3
		Subtotal: 3

Total Credit Hours: 21-22

Studio Art Minor

Studio Art Minor Requirements

Core Requirements

ART 100	2D Design and Color Foundations	3
ART 102	3D Foundations	3
ART 109	Digital Foundations	3
		Subtotal: 9

Electives

Choose two of the following:

ART 263	World Arts	3
ART 264	Ancient-Medieval	3
ART 265	Renaissance-Modern	3
		Subtotal: 6

Choose one of the following:

ART 245	Ceramics I	3
ART 294	Sculpture I	3
		Subtotal: 3

Choose one of the following:

ART 351	Intaglio Printmaking	3
ART 352	Lithographic Printmaking	3
ART 373	Basic Black and White Photography	3
		Subtotal: 3

ART elective

ART	elective	3
		Subtotal: 3

Total Credit Hours: 24

Visual Communication Minor

Visual Communication Minor Requirements

For non-art students only.

Core Requirements

ART 100	2D Design and Color Foundations	3
ART 109	Digital Foundations	3
ART 112	Drawing Foundations	3
ART 205	Graphic Design I	3
ART 206	Websites I	3
		Subtotal: 15

Electives

Choose nine hours (three courses) from the following:

ART 207	Websites II	3
ART 302	Typography	3
ART 305	Graphic Design II	3
ART 306	Websites III	3
ART 309	Computer Art	3
ART 320	Survey of Graphic Design	3
ART 333	Design Layout and Pre-Press	3
ART 410	Motion Graphics	3
		Subtotal: 9

Total Credit Hours: 24

English and Modern Languages Department

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English

English Faculty

A. Adams, K. Carlson, G. Colburn (Faculty Emeritus), B. Engle, M. Graves, F. Helphinstine (Faculty Emeritus), S. Henneberg, C. Holbrook, A. Hruby, N. James, P. Johnson, D. Mascle, R. Morrison (Faculty Emeritus), S. Morrison (Faculty Emeritus), L. Neeper (Faculty Emeritus), J. Niece, D. Porter, C. Prewitt, T. Reding, R. Royar (Faculty Emeritus), M. Sutton, A. Taylor

English Area with Teacher Certification (Secondary) – Bachelor of Arts

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

TEP Admission Requirements

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and

- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

1. Students differentiate major periods of Anglo-American Literature.
2. Students distinguish the features of major literary genres.
3. Students recognize works by major authors.
4. Students write critically about literature.
5. Students select appropriate sources for literary analysis.
6. Students synthesize sources in writing about literature.
7. Knowledge of contemporary pedagogy in English studies.

Assessment

1. Coursework portfolio of planning and assessment
2. Running record for literacy teaching
3. Contextual factors for diversity
4. EdTPA in student teaching semester

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Literature Cornerstone

ENG 300	Introduction to the Study of Literature in English	3
		Subtotal: 3

Literature Surveys

ENG 331	British Literature to 1789	3
ENG 332	British Literature since 1789	3
ENG 341	American Literature to 1865	3
ENG 342	American Literature since 1865	3
		Subtotal: 12

Major Author

ENG 495	Seminar: Major Writers	3
		Subtotal: 3

English Language Arts Pedagogy

ENG 280	Introduction to Teaching English in Middle and Secondary Schools	3
ENG 381	Teaching Literature in Secondary Schools	3
ENG 382	Teaching Writing in Secondary Schools	3
ENG 400	Studies in English for Teachers*	3
		Subtotal: 12

Capstone

ENG 499C	Senior Seminar in English	3
		Subtotal: 3

Linguistics I

Choose one of the following:

ENG 305	Introduction to Linguistics	3
ENG 315	Structure of English	3
		Subtotal: 3

Linguistics II

Choose one of the following:

ENG 393	History of the English Language	3
ENG 394	Language and Society	3
		Subtotal: 3

Writing I

Choose one of the following:

ENG 390	Professional Writing	3
ENG 391	Advanced Expository Writing	3
CVM 401	Advanced Multimedia News	3
CVM 465	Opinion Writing	3
		Subtotal: 3

Writing II

Choose one of the following:

ENG 395	Poetry Writing	3
ENG 396	Fiction Writing	3
ENG 397	Creative Nonfiction Writing	3
ENG 483	Advanced Poetry Writing	3
ENG 484	Advanced Fiction Writing	3
ENG 485	Advanced Nonfiction Writing	3
		Subtotal: 3

Literature Electives

Cultural Diversity - Select one course from the following:

ENG 311	Global English Literature	3
ENG 320	Women Writers and Feminist Perspectives	3
ENG 348	African American Literature	3
ENG 360	Appalachian Literature	3
ENG 365	Literature of the South	3
ENG 398	Gay and Lesbian Literature	3
		Subtotal: 3

Literary Period - Select one course from the following:

ENG 422	Studies in American Literature to 1900	3
ENG 423	Studies in American Literature, 1900-1965	3
ENG 424	Studies in Contemporary American Literature	3
ENG 436	The English Renaissance	3
ENG 441	Restoration and Eighteenth-Century British Literature	3
ENG 442	Romantic Writers	3
ENG 443	Victorian Writers	3
ENG 444	British Literature since 1901	3
		Subtotal: 3

Genre - Select one course from the following:

ENG 344	The Short Story and the Novel	3
ENG 432	The British Novel	3
ENG 435	Shakespeare	3
ENG 453	Modern Drama	3
ENG 455	Early Dramatic Literature	3
ENG 463	American Fiction	3
ENG 466	American Poetry	3
ENG 470	Film and Literature	3
		Subtotal: 3

Foreign Language

Three semester hours in one foreign language above the first semester level, e.g., French, Spanish, German, Italian, Latin or Russian.

Subtotal: 3

Professional Education Requirements

EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDF 311	Learning Theories, Assessment and Diversity*	3
EDSE 312	Educational Methods and Technology*	3
EDSE 483	Classroom Organization and Management for Secondary Teachers*	3
EDSP 230	Education of Exceptional Children	3
EDSE 416	Clinical Practice*	12

Subtotal: 30

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

English Major – Bachelor of Arts

Program Competencies

1. Students differentiate major periods of Anglo-American Literature.
2. Students distinguish the features of major literary genres.
3. Students recognize works by major authors.
4. Students write critically about literature.
5. Students select appropriate sources for literary analysis.
6. Students synthesize sources in writing about literature.

Assessment

1. Exit examinations
2. Survey of graduates

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

English Core

Literature Cornerstone

ENG 300	Introduction to the Study of Literature in English	3

Subtotal: 3

Literature Surveys

ENG 331	British Literature to 1789	3
ENG 332	British Literature since 1789	3
ENG 341	American Literature to 1865	3
ENG 342	American Literature since 1865	3

Subtotal: 12

Major Author

ENG 495	Seminar: Major Writers	3

Subtotal: 3

Capstone

ENG 499C	Senior Seminar in English	3

Subtotal: 3

Literature Electives

Linguistics

Choose one of the following:

ENG 305	Introduction to Linguistics	3
ENG 315	Structure of English	3
ENG 393	History of the English Language	3
ENG 394	Language and Society	3

Subtotal: 3

Writing I

Choose one of the following:

ENG 390	Professional Writing	3
ENG 391	Advanced Expository Writing	3

Subtotal: 3

Writing II

Choose one of the following:

ENG 395	Poetry Writing	3
ENG 396	Fiction Writing	3
ENG 397	Creative Nonfiction Writing	3
ENG 483	Advanced Poetry Writing	3
ENG 484	Advanced Fiction Writing	3
ENG 485	Advanced Nonfiction Writing	3

Subtotal: 3

Cultural Diversity

Choose one of the following:

ENG 311	Global English Literature	3
ENG 320	Women Writers and Feminist Perspectives	3
ENG 348	African American Literature	3
ENG 360	Appalachian Literature	3
ENG 365	Literature of the South	3
ENG 398	Gay and Lesbian Literature	3

Subtotal: 3

Literary Period

Choose one of the following:

ENG 422	Studies in American Literature to 1900	3
ENG 423	Studies in American Literature, 1900-1965	3
ENG 424	Studies in Contemporary American Literature	3
ENG 436	The English Renaissance	3
ENG 441	Restoration and Eighteenth-Century British Literature	3
ENG 442	Romantic Writers	3
ENG 443	Victorian Writers	3
ENG 444	British Literature since 1901	3

Subtotal: 3

Genre

Choose one of the following:

ENG 344	The Short Story and the Novel	3
ENG 432	The British Novel	3
ENG 435	Shakespeare	3
ENG 453	Modern Drama	3
ENG 455	Early Dramatic Literature	3
ENG 463	American Fiction	3
ENG 466	American Poetry	3
ENG 470	Film and Literature	3

Subtotal: 3

Foreign Language

Three semester hours in one foreign language above 101, e.g., French, Spanish, German, Italian, Latin or Russian.

Subtotal: 3

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Creative Writing Major – Bachelor of Fine Arts

Program Competencies

1. Students distinguish features of major literary genres.
2. Students recognize works by major authors.
3. Students create original works of fiction.
4. Students create original poems.
5. Students create original essays.
6. Students critique peers' work.

Assessment

1. Survey of graduates
2. Portfolio
3. Annual assessment of original works of creative writing via a cumulative portfolio
4. Yearly progress reports
5. Assessment of senior thesis - all graduating BFA candidates are required to present a senior thesis in the form of a cumulative portfolio that contains a collection of the student's best writing. This portfolio will be discussed during a 30-minute defense in which the student will be required to discuss the work, its literary influences, ideas toward publication, process, etc.

Program Requirements

The BFA in creative writing diverges from the BA in English in its significantly greater concentration on the study of creative writing (requiring 18 credit hours in creative writing and a senior creative thesis).

General Education

General Education Courses	(See GNED Course Listings)	33

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

Creative Writing Core

ENG 293	Creative Writing I	3
ENG 395	Poetry Writing	3
ENG 396	Fiction Writing	3
ENG 397	Creative Nonfiction Writing	3
ENG 483	Advanced Poetry Writing	3
ENG 484	Advanced Fiction Writing	3
ENG 485	Advanced Nonfiction Writing	3
ENG 495	Seminar: Major Writers	3
CRW 499C	Senior Thesis	3

Subtotal: 27

Literature Cornerstone

ENG 300	Introduction to the Study of Literature in English	3

Subtotal: 3

ENG 300: only offered in spring

Literature Surveys

Select three of the following:

ENG 331	British Literature to 1789	3
ENG 332	British Literature since 1789	3
ENG 341	American Literature to 1865	3
ENG 342	American Literature since 1865	3

Subtotal: 9

Literature and Linguistics electives

Select two of the following, no more than one course from a specific area:

Linguistics

ENG 305	Introduction to Linguistics	3
ENG 315	Structure of English	3
ENG 393	History of the English Language	3
ENG 394	Language and Society	3

Cultural Diversity

ENG 311	Global English Literature	3
ENG 320	Women Writers and Feminist Perspectives	3
ENG 348	African American Literature	3
ENG 360	Appalachian Literature	3
ENG 365	Literature of the South	3
ENG 398	Gay and Lesbian Literature	3

Literary Period

ENG 422	Studies in American Literature to 1900	3
ENG 423	Studies in American Literature, 1900-1965	3
ENG 424	Studies in Contemporary American Literature	3
ENG 436	The English Renaissance	3
ENG 441	Restoration and Eighteenth-Century British Literature	3
ENG 442	Romantic Writers	3
ENG 443	Victorian Writers	3
ENG 444	British Literature since 1901	3

Genre

ENG 344	The Short Story and the Novel	3
ENG 432	The British Novel	3
ENG 435	Shakespeare	3
ENG 453	Modern Drama	3
ENG 455	Early Dramatic Literature	3
ENG 463	American Fiction	3
ENG 466	American Poetry	3
ENG 470	Film and Literature	3

Subtotal: 6

Supplemental Requirements

Foreign Language	one course above 101-level in any foreign language	3

Subtotal: 3

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

English Minor

English Minor Requirements

American Literature Surveys

Choose three hours (one course) from the following:

ENG 341	American Literature to 1865	3
ENG 342	American Literature since 1865	3
		Subtotal: 3

British Literature Surveys

Take both of the following (two courses):

ENG 331	British Literature to 1789	3
ENG 332	British Literature since 1789	3
		Subtotal: 6

Linguistics

Choose three hours (one course) from the following:

ENG 305	Introduction to Linguistics	3
ENG 315	Structure of English	3
ENG 393	History of the English Language	3
ENG 394	Language and Society	3
ENG 401	Semantics	3
ENG 404	Advanced Syntax	3
		Subtotal: 3

Writing

Choose three hours (one course) from the following:

ENG 390	Professional Writing	3
ENG 391	Advanced Expository Writing	3
ENG 395	Poetry Writing	3
ENG 396	Fiction Writing	3
ENG 397	Creative Nonfiction Writing	3
ENG 483	Advanced Poetry Writing	3
ENG 484	Advanced Fiction Writing	3
ENG 485	Advanced Nonfiction Writing	3
		Subtotal: 3

English Electives

Choose nine hours (six hours of which must be 300-400 level courses) from the following:

English Electives	200-400 level courses in English	9
		Subtotal: 9

Total Credit Hours: 24

The minor in English does not include the general education requirements in composition (six semester hours - ENG 100 and ENG 200).

Creative Writing Minor

The minor in creative writing is designed for students who wish to develop their writing skills in a variety of genres.

Creative Writing Minor Requirements

Writing courses

Choose twelve hours (four courses) from the following:

ENG 391	Advanced Expository Writing	3
ENG 395	Poetry Writing	3
ENG 396	Fiction Writing	3
ENG 397	Creative Nonfiction Writing	3
ENG 483	Advanced Poetry Writing	3
ENG 484	Advanced Fiction Writing	3
ENG 485	Advanced Nonfiction Writing	3
THEA 412	Playwriting	3
		Subtotal: 12

Electives

Literature electives	300-400 level courses	3
Additional electives	300-400 level courses in literature, linguistics, or foreign languages	6
		Subtotal: 9

Total Credit Hours: 21

Linguistics Minor

The purpose of the minor in linguistics is (1) to contribute to students' liberal education by allowing them to investigate the nature, acquisition, history, and function of human language and (2) to prepare them for careers in which language or language structure is of central importance, including careers in education, law, communications, foreign language, translation, journalism, technical writing, psychology, anthropology and speech pathology.

Linguistics Minor Requirements

Linguistics

Choose six hours (two courses) or nine hours (three courses) from the following:

ENG 205	Language: Culture and Mind	3
ENG 305	Introduction to Linguistics	3
ENG 315	Structure of English	3
ENG 393	History of the English Language	3
ENG 394	Language and Society	3
ENG 401	Semantics	3
ENG 404	Advanced Syntax	3
		Subtotal: 6-9

Note: If a student takes two linguistics courses, then three electives will be required; if a student takes three linguistics courses, only two electives will be needed.

Electives in related disciplines:

Choose six hours (two courses) or nine hours (three courses) from the following:

CIS 202	Introduction to Programming - Visual Basic	3
CIS 205	Introduction to Programming - C++	3
CIS 326	Introduction to Databases	3
COMS 250	Introduction to Intercultural Communication	3
COMS 333	Social Media and Community	3
COMS 350	Communication, Culture and Diversity	3
CS 170	Introduction to Computer Science	4
EDSP 320	Language Development and Intervention for Young Children	3
IST 250	International Culture and Diversity	3
NEUR 121	Introduction to Brain and Behavior	3
NEUR 223	Brain Development and Sex Differences	3
PHIL 106	Beginning Logic	3
PHIL 412	Symbolic Logic	3
PSY 121	Introduction to Brain and Behavior	3
PSY 223	Brain Development and Sex Differences	3
PSY 281	Psychological Research Methods	3
PSY 300	Human Factors in Design	3
PSY 356	Cognitive Development of the Infant and Child	3
PSY 380	Cognitive Psychology	3
ENG 300-level or higher	elective	3
		Subtotal: 6-9

Foreign Language

Foreign Language	Take two from FRN, GER, ITL, LAT, SPA, CHI, RUS, etc.	6
		Subtotal: 6

Note: Foreign language courses do not have to be in the same language.

Total Credit Hours: 21

Modern Languages

Modern Languages Faculty

S. Alloway, M. Bycura, S. Cano (Faculty Emeritus), V. Cano (Faculty Emeritus), G. Hastings (Faculty Emeritus), P. Krummrich, K. Taylor, I. Zavala-Garrett

Spanish

The Spanish curriculum at MSU teaches the language and the literature of the Hispanic world, whereby students will perceive areas of thought and action different from their own. More specifically, it surveys Hispanic civilization through its history, geography, and fine arts, as well as political and social institutions. For students interested in international business, the curriculum offers the opportunity to acquire proficiency in Spanish for business and commerce.

Students may receive full credit at MSU for courses taken in summer, semester, and yearly education abroad programs, including those administered by the Kentucky Institute of International Studies (KIIS). Summer study opportunities are offered in Argentina, Costa Rica, Ecuador, Mexico and Spain. Two semester-long programs are also available: one for the fall semester in Morelia, Mexico, and one for the spring semester in Segovia, Spain. Participation is strongly encouraged.

The Spanish program prepares students to enter areas of teaching, interpretation, and translation. Further, the study of Spanish aids students seeking employment in areas where knowledge of a second language is beneficial — business and commerce, tourism, social services, and the like.

Note: SPA 300 — Grammar and Composition, is a prerequisite for all other 300 and above numbered courses except SPA 305 — Conversation.

Spanish Major – Bachelor of Arts

Program Competencies

Students will demonstrate:

1. Proficiency in the four skills (listening, reading, speaking and writing).
2. A firm command of Spanish grammatical structures.
3. Familiarity with significant aspects of the culture and civilization of the Hispanic world.
4. Familiarity with the most important works and trends of Spanish and Spanish American literature and, especially, an ability to analyze Hispanic literary passages.

Assessment

Exit proficiency exams

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

Spanish Core Requirements

SPA 101	Spanish Language and Culture I	3
SPA 102	Spanish Language and Culture II	3
SPA 201	Intermediate Spanish I	3
SPA 202	Intermediate Spanish II	3
SPA 300	Grammar and Composition	3
SPA 305	Conversation	3
SPA 315	Introduction to Hispanic Literature	3
SPA 499C	Senior Seminar	3

Subtotal: 24

Literature Electives

Choose one of the following:

SPA 432	Contemporary Spanish and Spanish American Literature	3
SPA 440	Seminar in Hispanic Literature	3

Subtotal: 3

Culture Electives

Choose one of the following:

SPA 304	Spanish Culture and Civilization	3
SPA 306	Latin American Culture and Civilization	3
SPA 330	Hispanics in the United States	3
SPA 340	Hispanic Popular Culture	3

Subtotal: 3

Electives

Choose one of the following:

SPA 304	Spanish Culture and Civilization	3
SPA 306	Latin American Culture and Civilization	3
SPA 309	Explorations in Hispanic Cinema Analysis	3
SPA 330	Hispanics in the United States	3
SPA 340	Hispanic Popular Culture	3
SPA 404	Advanced Spanish Grammar	3
SPA 432	Contemporary Spanish and Spanish American Literature	3
SPA 440	Seminar in Hispanic Literature	3

Subtotal: 3

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Spanish Minor

Minor Requirements

Basic Language

SPA 101	Spanish Language and Culture I	3
SPA 102	Spanish Language and Culture II	3
SPA 201	Intermediate Spanish I	3
SPA 202	Intermediate Spanish II	3

Subtotal: 12

Advanced Language

SPA 300	Grammar and Composition	3
SPA 305	Conversation	3

Subtotal: 6

Approved 300-400 level electives

Subtotal: 3

Total Credit Hours: 21

Students enrolling at Morehead State University should take a placement examination in Spanish if they have studied the language previously and intend to continue their Spanish studies at MSU. The placement test is available on request. Students should consult any member of the languages faculty to arrange to take it at any time on the web. The test

takes no more than 30 minutes to complete. The score is sent automatically to the student and to the department. We will recommend placement on the basis of the score. It is strongly recommended that Spanish courses begin in the freshman year and that the courses be taken without interruption.

Note: Those who begin in a more advanced class will have the opportunity to earn credit by examination for the classes they do not need to take. Please consult the department for details.

French Minor

French Minor Requirements

Core Requirements

FRN 101	Beginning French I	3
FRN 102	Beginning French II	3
FRN 201	Intermediate French	3
FRN 202	Conversation and Composition	3
FRN 301	Advanced Grammar and Composition	3

Subtotal: 15

French Electives

Choose six hours from FRN 203 or higher.

Subtotal: 6

Total Credit Hours: 21

Chinese, German, Latin

No academic programs in these languages are available. Refer to the course description section for course offerings. For questions, contact the English and Modern Languages Department.

History Philosophy Politics Global Studies and Legal Studies Department

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Faculty

J. Adkins, R. Berglee, R. Caric (Faculty Emeritus), V. Craig, S. Davison (Faculty Emeritus), J. Ernst (Faculty Emeritus), B. Fitzpatrick, D. Grise, J. Holcomb, T. Kiffmeyer, A. Mandzy, J. Masterson, D. Mock, D. Murphy (Faculty Emeritus), W. O'Brien (Faculty Emeritus), G. O'Dell, C. Prusik, A. Scott, J. Weir (Faculty Emeritus)

History

The major and minor in history seek to engage students in critical thinking by evaluating, creating and supporting historical arguments. Students will demonstrate this knowledge visually, orally, and in writing. Our teaching and course offerings provide a forum for open inquiry, and the rigorous academic reading and writing of our program prepares students for the challenges of the 21st century by teaching them to think critically, analytically, and ardently about the historical processes that have shaped and continue to shape our community, our state, our nation, and our world.

History Major – Bachelor of Arts

Program Competencies

Goal 1: Historical Knowledge. Students will demonstrate an understanding of key concepts in both American and World History.

Goal 2: Critical Thinking. Students will demonstrate the critical thinking abilities necessary for professionals in the field.

Goal 3. Written and Oral Communication. Students will exhibit proficient oral and written communication skills.

Assessment

1. History Achievement Test
2. Capstone course

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

HST 260	American History to 1865	3
HST 261	American History since 1865	3
HST 270	World History to 1500	3
HST 271	World History Since 1500	3
HST 300	Practicing History	3
HST 301-306	Chronological U.S. History	3
HST 311-328	Chronological World History	3
HST 340-360	Thematic U.S. History	3
HST 370-375	Thematic World History	3
HST 380	Junior Seminar	3
HST 3XX	Elective in History	3
HST 499C	Senior Seminar in History	3

Subtotal: 36

Additional Constraints:

Students are permitted to use only one course in the program from each of the following pairs:

1. HST 352 or HST 353
2. HST 341 or HST 342

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Public History Area – Bachelor of Arts

Program Competencies

Goal 1: Historical Knowledge. Students will demonstrate an understanding of key concepts in both American and World History.

Goal 2: Critical Thinking. Students will demonstrate the critical thinking abilities necessary for professionals in the field.

Goal 3. Written and Oral Communication. Students will exhibit proficient oral and written communication skills.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements

that are also general education requirements will count in both places (as applicable).

Area Requirements

Public History Core Requirements

HST 260	American History to 1865	3
HST 261	American History since 1865	3
HST 270	World History to 1500	3
HST 271	World History Since 1500	3
HST 300	Practicing History	3
HST 310	Introduction to Public History	3
HST 380	Junior Seminar	3
HST 392	Internship	3
HST 499C	Senior Seminar in History	3
		Subtotal: 27

Chronological History Electives

Choose six hours (two courses) from the following:

HST 301-328	Chronological History	6
		Subtotal: 6

Thematic History Electives

Choose six hours (two courses) from the following:

HST 340-375	Thematic History	6
		Subtotal: 6

Public History Electives

Choose 12 hours from the following approved electives. No more than six hours can be in the same prefix.

ART 201	Arts Entrepreneurship	3
ART 361	Ancient Art	3
ART 362	Medieval Art	3
ART 363	Renaissance Art	3
ART 364	Mannerist and Baroque Art	3
ART 461	18th and 19th Century European and U.S. Art	3
ART 462	20th Century Art	3
ART 468	Appalachian Arts	3
CIS 320	Web Technologies and Design	3
CIS 311	Management Information Systems	3
COMS 300	Strategic Organizational Leadership	3
COMS 350	Communication, Culture and Diversity	3
COMS 382	Public Relations Principles	3
CVM 240	Elements of Studio Production I	3
CVM 462	Media Criticism	3
CVM 492	Media Law and Ethics	3
ENG 390	Professional Writing	3
GEO 349	GIS 1	3
ECC 101	Introduction to Construction Engineering	3
MNGT 201	Principles of Management	3
MNGT 310	Small Business Organization	3
MKT 204	Marketing	3
MKT 340	E-Marketing and Social Networking	3
MKT 345	Marketing Strategies for Small Business	3
MKT 354	Consumer Behavior	3
MUSW 310	Music Business	2
LGS 332	Property Law	3
LGS 335	Contracts and the Uniform Commercial Code	3
PHIL 308	Philosophy of the Arts	3
PSY 300	Human Factors in Design	3
		Subtotal: 12

Notes: CVM 240 (must take corresponding lab). MKT 204: Prerequisite for 300-level Marketing

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

History Minor

History Minor Requirements

Core Requirements

HST 260	American History to 1865	3
HST 261	American History since 1865	3
HST 270	World History to 1500	3
HST 271	World History Since 1500	3
		Subtotal: 12

Electives

Four HST 3XX	Electives in History	12
		Subtotal: 12

Additional Requirements:

Students are permitted to use only one course in the program from each of the following pairs:

1. HST 352 - Appalachia or HST 353 - Kentucky
2. HST 341 - Native American History or HST 342 - American Frontier

Total Credit Hours: 24

Public History Minor

Public History Minor Requirements

Core Requirements

HST 310	Introduction to Public History	3
HST 392	Internship	3
		Subtotal: 6

Electives

Choose three hours (one course) from the following:

HST 260	American History to 1865	3
HST 261	American History since 1865	3
		Subtotal: 3

Choose three hours (one course) from the following:

HST 270	World History to 1500	3
HST 271	World History Since 1500	3
		Subtotal: 3

Choose six hours (two courses) from the following:

HST 3XX	Electives in History	6
		Subtotal: 6

Choose six hours (two courses) from the following additional electives:

ART 201	Arts Entrepreneurship	3
ART 361	Ancient Art	3
ART 362	Medieval Art	3
ART 363	Renaissance Art	3
ART 364	Mannerist and Baroque Art	3
ART 461	18th and 19th Century European and U.S. Art	3
ART 462	20th Century Art	3
ART 468	Appalachian Arts	3
CIS 311	Management Information Systems	3
CIS 320	Web Technologies and Design	3
COMS 300	Strategic Organizational Leadership	3
COMS 350	Communication, Culture and Diversity	3
CVM 240	Elements of Studio Production I	3
CVM 462	Media Criticism	3
CVM 492	Media Law and Ethics	3
ENG 390	Professional Writing	3

GEO 349	GIS 1	3
MKT 204	Marketing	3
MKT 340	E-Marketing and Social Networking	3
MKT 345	Marketing Strategies for Small Business	3
MKT 354	Consumer Behavior	3
MNGT 201	Principles of Management	3
MNGT 310	Small Business Organization	3
PHIL 308	Philosophy of the Arts	3
LGS 332	Property Law	3
LGS 335	Contracts and the Uniform Commercial Code	3
PSY 300	Human Factors in Design	3
		Subtotal: 6

Total Credit Hours: 24

Political Science and Public Policy

The political science program focuses upon the understanding of public life, the study of politics, and the preparation of students for both citizenship and careers in law and public service. Political science is the study of human beings living together in order to pursue the good life and happiness. This includes the study of human nature, the philosophical foundations of political life, constitutional orders, institutional arrangements, political development, electoral politics, and public policy. Political Science spans these major sub-fields: American politics, political philosophy, public law, methodology, comparative politics, and international relations. Thus, the study of political science includes not only the United States but also people and political systems around the world.

Political science is an important part of a liberal education. Students will develop their reading, writing, communication, and analytical skills. They will learn to think carefully and independently about complex problems. They will learn to consider both immediate details as well as broader contexts. They will refine their understanding of human nature and their ability to work with others. This produces a solid set of skills that employers value highly, that is flexible, and that will prepare students for a wide range of careers in public service, including federal, state, and local government, nonprofit organizations, and the private sector.

The study of political science is excellent preparation for law school as well. The American Bar Association statement (www.americanbar.org) on how to prepare for a legal degree emphasizes learning important background knowledge that the political science major provides, including “a fundamental understanding of political thought and of the contemporary American political system; …a basic understanding of human behavior and social interaction; … an understanding of diverse cultures within and beyond the United States, of international institutions and issues, of world events, and of the increasing interdependence of the nations and communities within our world.” As a result, political science is the number one major for students who take the LSAT and go to law school nationwide.

The History, Philosophy, Politics, Global Studies, and Legal Studies Department offers undergraduate and graduate scholarships, paid research fellowships, excellent internship opportunities, and exciting education abroad experiences, all of which enhance students’ education and career prospects. The research and outreach of the political science program brings students and faculty together with local citizens, public officials, policymakers and political leaders to develop research projects and public policies that support the region. For more information, visit https://moreheadstate.edu/academics/colleges/humanities/humanities-social-sciences/history-philosophy-politics-global-legal-studies/.

Political Science

The political science major and government minor provide students with the opportunity to study political ideas, institutions and policies. The political science faculty offers courses in political thought, American national, state and local government and public law, public administration, comparative government and international relations. National government internships and seminars are available through the Washington Center. Students who study government usually pursue careers in law, teaching or government service. Political science is also an excellent liberal arts major that prepares students for a wide array of careers. See www.apsanet.org for more on careers in political science.

Political Science Major – Bachelor of Arts

Program Competencies

Students are expected to possess:

1. The ability to exhibit knowledge of political conditions within the United States including the working of formal and informal institutions and the role of conflict, special interest, power and inequities in the policy making process.
2. An understanding of the political systems in other countries, the relations between countries and the functioning of international institutions. This is the basis for comparative study and evaluation of the United States political system.
3. The ability to analyze the impact of government policies on social and economic conditions in the United States and other countries.
4. The ability to recognize and value the varied nature of the human condition across individuals and culture groups through the practice of political analysis.
5. The ability to use methods of political investigation, to conduct original studies, and to present findings from those investigations in written and oral formats.
6. The ability to access and use electronic databases, information sites, and various online resources.

Assessment

1. The Political Science Major Field Test (MFAT) will be administered in POLS 499C. Results will be collected and analyzed by the POLS coordinator and/or the department chair.
2. The U.S. Citizenship and Immigration Services Citizenship Test will be administered in POLS 140 and POLS 499C. Results will be collected and analyzed by the POLS coordinator and/or the department chair.
3. Preliminary assessment of students' ability to employ political science research methods will occur in POLS 200.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Political Science Core Requirements

POLS 110	Introduction to Political Theory	3
POLS 140	United States Government	3
POLS 200	Methods of Political Inquiry	3
POLS 230	Introduction to Comparative Politics	3
POLS 262	U.S. Foreign Policy	3
POLS 321	Constitutional Law: Governmental Powers	3
POLS 352	American Public Policy	3
POLS 499C	Senior Seminar	3
		Subtotal: 24

Political Science Advanced Subfields

Choose one course from each of the following subfields.

1. Political Theory

POLS 311	Politics, Justice and the Good Life	3
POLS 312	Classical and Medieval Political Thought	3
POLS 314	American Political Thought	3
POLS 316	Modern Political Thought	3
POLS 317	Feminist Political Thought	3
POLS 318	Contemporary Political Thought	3
POLS 319	Islamic Political Thought	3
POLS 410	Seminar in Political Theory	3
		Subtotal: 3

2. Public Law

POLS 322	Courts and Civil Liberties	3
POLS 324	Environmental Law and Policy	3
POLS 325	Federalism and the Constitution	3
POLS 328	Law, Government and Privacy in the Internet Age	3
POLS 329	Comparative Constitutional Law and Politics	3
POLS 420	Seminar in Public Law	3
		Subtotal: 3

3. Comparative Politics

POLS 330	European Parliamentary Democracies	3
POLS 331	Politics of the Middle East and North Africa	3
POLS 332	Politics of Latin America and the Caribbean	3
POLS 333	Politics of Sub-Saharan Africa	3
POLS 334	Politics of Russia and Eastern Europe	3
POLS 335	Politics of Development and Democratization	3
POLS 336	North American Politics: United States and Canada	3
POLS 337	Politics of Asia	3
POLS 338	Politics of Transition	3
POLS 386	Comparative Counterterrorism	3
POLS 388	Comparative Foreign Policy	3
POLS 430	Seminar in Comparative Politics	3
		Subtotal: 3

4. American Politics

POLS 242	State and Local Government	3
POLS 342	The American Presidency	3
POLS 343	Political Parties and Elections	3
POLS 344	Kentucky Government	3
POLS 345	Congress and the Federal Bureaucracy	3
POLS 350	Political Behavior	3
POLS 351	Public Administration	3
POLS 353	Public Personnel Administration	3
POLS 354	African-American Politics	3
POLS 355	Women and Politics	3
POLS 381	Evolution of the U.S. Intelligence Community	3
POLS 440	Seminar in American Politics	3
POLS 451	Seminar in Bureaucracy and Public Management	3
		Subtotal: 3

5. International Relations

POLS 360	International Relations	3
POLS 361	Globalization and its Discontents	3
POLS 362	Current World Problems	3
POLS 365	United Nations and World Organizations	3
POLS 367	Politics of International Economic Relations	3
POLS 368	Human Rights and Global Justice	3
POLS 369	Political Geography	3
POLS 382	Intelligence Process	3
POLS 383	Counterintelligence	3
POLS 384	Intelligence Analysis	3
POLS 385	Terrorism and Political Violence	3
POLS 387	National Security Strategy	3
POLS 460	Seminar in International Relations	3
		Subtotal: 3

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Political Science Major (Public Policy Track) – Bachelor of Arts

Program Competencies

Students are expected to possess:

1. The ability to exhibit knowledge of political conditions within the United States including the working of formal and informal institutions and the role of conflict, special interest, power and inequities in the policy making process.
2. An understanding of the political systems in other countries, the relations between countries and the functioning of international institutions. This is the basis for comparative study and evaluation of the United States political system.
3. The ability to analyze the impact of government policies on social and economic conditions in the United States and other countries.
4. The ability to recognize and value the varied nature of the human condition across individuals and culture groups through the practice of political analysis.
5. The ability to use methods of political investigation, to conduct original studies, and to present findings from those investigations in written and oral formats.
6. The ability to access and use electronic databases, information sites, and various online resources.

Assessment

1. Capstone course

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Political Science Core Requirements

POLS 110	Introduction to Political Theory	3
POLS 140	United States Government	3

POLS 200	Methods of Political Inquiry	3
POLS 230	Introduction to Comparative Politics	3
POLS 262	U.S. Foreign Policy	3
POLS 321	Constitutional Law: Governmental Powers	3
POLS 352	American Public Policy	3
POLS 499C	Senior Seminar	3
		Subtotal: 24

Public Policy Track Requirements

ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
POLS 351	Public Administration	3
		Subtotal: 9

Public Policy Track Electives

Choose 6-15 hours from the following:

POLS 242	State and Local Government	3
POLS 314	American Political Thought	3
POLS 324	Environmental Law and Policy	3
POLS 325	Federalism and the Constitution	3
POLS 336	North American Politics: United States and Canada	3
POLS 342	The American Presidency	3
POLS 343	Political Parties and Elections	3
POLS 344	Kentucky Government	3
POLS 345	Congress and the Federal Bureaucracy	3
POLS 354	African-American Politics	3
POLS 355	Women and Politics	3
POLS 420	Seminar in Public Law	3
POLS 451	Seminar in Bureaucracy and Public Management	3
POLS 492	Washington Center Seminar Program	3
POLS 494	Washington Center Internship Program	3-15
POLS 496	Frankfort Legislative Internship Program	15
POLS 498	Local, State, National and International Government Internship	3-15
ECON 341	Public Finance	3
ECON 342	Money and Banking	3
ECON 350	Intermediate Microeconomics	3
ECON 351	Intermediate Macroeconomics	3
ECON 401	Environmental Economics	3
ECON 447	International Economics	3
LGS 355	Administrative Law	3
LGS 370	History of American Law	3
PPOL 399	Selected Topics in Public Policy	3
RAPP 300	Seminar in Regional Issues I	3
RAPP 350	Practicing Regional Analysis I	3
RAPP 376	Directed Research	3
RAPP 450	Practicing Regional Analysis II	3
RAPP 490	Seminar in Regional Issues II	3
COMS 250	Introduction to Intercultural Communication	3
COMS 290	Conflict and Communication	3
COMS 300	Strategic Organizational Leadership	3
COMS 310	Professional Presentations and Speech Writing	3
COMS 330	Argumentation and Persuasion	3
COMS 333	Social Media and Community	3
COMS 340	Event Planning and Public Relations	3
COMS 350	Communication, Culture and Diversity	3
COMS 370	Communication and Health	3
COMS 382	Public Relations Principles	3
COMS 405	Communication Issue Management	3
COMS 482	Public Relations Campaigns	3
CRIM 250	Introduction to the Criminal Justice System	3
CRIM 317	Police Culture	3
CRIM 385	Contemporary Legal Issues in the Criminal Justice System	3
CRIM 388	Sociology of Punishment	3
CRIM 404	Crime and Justice Policies	3
CVM 492	Media Law and Ethics	3
ENG 390	Professional Writing	3
GEO 345	Global Environmental Sustainability	3
GEO 349	GIS 1	3
GEO 351	GIS 2	3
GEO 455	GIS Applications	3
GST 273	Introduction to Gender Studies	3
GST 322	Gender and Education	3
GST 333	Women and Partner Violence	3
GST 335	Families in Modern Society	3
GST 350	Sex and Gender	3
NURS 345	Global Health	3
NURS 361	Leadership for the Health Care Professional	3
NURS 430	Health Disparities	3
PPOL 400	Ethics in Public Policy	3
PHIL 103	Beginning Ethics	3
PHIL 303	Ethics	3
SOC 203	American Social Problems	3
SOC 300	Class, Power, and Privilege	3
SOC 323	Urban Sociology	3
SOC 325	Global Inequality	3
SOC 354	Individual and Society	3
SOC 370	Rural Sociology	3
SOC 372	Victimology	3
SOC 374	Race and Ethnicity	3
SOC 380	Race, Class, Gender and Crime	3
SOC 404	Crime and Justice Policies	3
SOC 426	Communities	3
SOC 456	Organizations in Contemporary Society	3
SOC 459	Social Change in Appalachia	3
SOC 461	Sociology of the Law	3
		Subtotal: 6-15

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Political Science Minor

Political Science Minor Requirements

Core Requirements

POLS 110	Introduction to Political Theory	3
POLS 140	United States Government	3
POLS 200	Methods of Political Inquiry	3
POLS 230	Introduction to Comparative Politics	3
POLS 262	U.S. Foreign Policy	3
		Subtotal: 15

Advanced Subfield Electives

Choose one course (three hours) from each of the following subfields:

1. Political Theory, American Politics, and Public Law

POLS 311	Politics, Justice and the Good Life	3

POLS 312	Classical and Medieval Political Thought	3
POLS 314	American Political Thought	3
POLS 316	Modern Political Thought	3
POLS 317	Feminist Political Thought	3
POLS 318	Contemporary Political Thought	3
POLS 319	Islamic Political Thought	3
POLS 321	Constitutional Law: Governmental Powers	3
POLS 322	Courts and Civil Liberties	3
POLS 324	Environmental Law and Policy	3
POLS 325	Federalism and the Constitution	3
POLS 328	Law, Government and Privacy in the Internet Age	3
POLS 329	Comparative Constitutional Law and Politics	3
POLS 342	The American Presidency	3
POLS 343	Political Parties and Elections	3
POLS 344	Kentucky Government	3
POLS 345	Congress and the Federal Bureaucracy	3
POLS 350	Political Behavior	3
POLS 351	Public Administration	3
POLS 352	American Public Policy	3
POLS 353	Public Personnel Administration	3
POLS 354	African-American Politics	3
POLS 355	Women and Politics	3
POLS 410	Seminar in Political Theory	3
POLS 420	Seminar in Public Law	3
POLS 440	Seminar in American Politics	3
POLS 451	Seminar in Bureaucracy and Public Management	3
		Subtotal: 3

2. Comparative Politics and International Relations

POLS 330	European Parliamentary Democracies	3
POLS 331	Politics of the Middle East and North Africa	3
POLS 332	Politics of Latin America and the Caribbean	3
POLS 333	Politics of Sub-Saharan Africa	3
POLS 334	Politics of Russia and Eastern Europe	3
POLS 335	Politics of Development and Democratization	3
POLS 336	North American Politics: United States and Canada	3
POLS 337	Politics of Asia	3
POLS 338	Politics of Transition	3
POLS 360	International Relations	3
POLS 361	Globalization and its Discontents	3
POLS 362	Current World Problems	3
POLS 365	United Nations and World Organizations	3
POLS 367	Politics of International Economic Relations	3
POLS 368	Human Rights and Global Justice	3
POLS 369	Political Geography	3
POLS 430	Seminar in Comparative Politics	3
POLS 460	Seminar in International Relations	3
		Subtotal: 3

Total Credit Hours: 21

Regional Analysis and Public Policy Program

Regional Analysis and Public Policy (RAPP) examines real world issues that affect peoples' social, economic and political lives. RAPP brings students and faculty together with citizens, local and regional leaders, and policymakers to develop research projects and action plans that address problems that challenge the region in order to promote sustainable community and economic development. RAPP integrates teaching, applied research, and public service to address issues that significantly affect east Kentucky, Appalachia, and rural America in general.

The government major with RAPP track, as well as the RAPP minor, provide students with opportunities to develop research skills, work on real world problems with faculty and public leaders, gain valuable internship experience, and ultimately become prepared for careers in public service. Students gain knowledge and skills in regional analysis, community development, and policy making. They increase their qualitative and quantitative research skills, conduct group research projects, present results at conferences (including Frankfort and Washington, D.C.), and work one-on-one with faculty members on their own research interests. This is a practical, applied program that provides students with the knowledge and skills necessary to help communities and regions move forward and prosper.

Students who wish to work in high-level managerial careers in public service may pursue a Master of Public Administration (MPA). Students can begin working on the MPA during their senior year through the Early Graduate School program. For details, visit https://moreheadstate.edu/academics/programs/master-of-public-administration-mpa.

Regional Analysis and Public Policy Minor

Admission Requirements

Acceptance to this program requires 15 credit hours with GPA above 2.5. A personal interview will also be required for admission into the RAPP program.

Program Competencies

The student will:

1. Understand the relation of their major program to the other fields in regional analysis.
2. Make sound verbal and written arguments that delineate a public policy.
3. Possess the quantitative and qualitative skills to understand regional analysis.
4. Understand the factors that affect and shape occupational vocations in a regional context.
5. Be able to accurately communicate with public and private individuals the meaning and applications of regional analysis.
6. Be able to present research and policy reports that are comprehensible to audiences of various public policymakers.
7. Be able to interpret the output of regional resource analyses and their potential use in formulating public policy.

The students in this program will meet the goals of Enhancement of Instruction by actively participating in a unique, intense interdisciplinary program. They will participate in service and research functions of the University, and will participate in the collaborative ventures of IRAPP with regional organizations.

Assessment

Compare employment rates, salaries and graduate school admissions with similar MSU graduates.

Regional Analysis and Public Policy Minor Requirements

Core Requirements

RAPP 202	Basic Computer Techniques in Regional Analysis	3
RAPP 203	Society, Nature and Development	3
RAPP 300	Seminar in Regional Issues I	3

RAPP 350	Practicing Regional Analysis I	3
RAPP 490	Seminar in Regional Issues II	3
		Subtotal: 15

Electives

Students will complete nine hours of approved 300- or 400-level courses; courses at other levels (e.g., 200) will be considered for approval on a case-by-case basis. Elective courses will be selected in consultation with the minor advisor in order to form a coherent program of study aimed at enhancing student analytic and problem-solving capacities and skills. A few examples of thematic electives include: geospatial methods, international studies, gender studies, multidisciplinary approaches, policy studies, etc. Students must obtain approval of thematic electives from both their minor advisor and the Department Chair.

Subtotal: 9

Total Credit Hours: 24

Public Administration Minor

Public Administration Minor Requirements

Core Requirements

POLS 140	United States Government	3
POLS 321	Constitutional Law: Governmental Powers	3
POLS 351	Public Administration	3
POLS 352	American Public Policy	3
		Subtotal: 12

Public Administration Electives

Choose six hours (two courses) from the following:

POLS 420	Seminar in Public Law	3
POLS 451	Seminar in Bureaucracy and Public Management	3
PPOL 400	Ethics in Public Policy	3
		Subtotal: 6

Electives

Choose six hours (two courses) from the following:

COMS 250	Introduction to Intercultural Communication	3
COMS 290	Conflict and Communication	3
COMS 300	Strategic Organizational Leadership	3
COMS 310	Professional Presentations and Speech Writing	3
COMS 330	Argumentation and Persuasion	3
COMS 333	Social Media and Community	3
COMS 340	Event Planning and Public Relations	3
COMS 350	Communication, Culture and Diversity	3
COMS 370	Communication and Health	3
COMS 382	Public Relations Principles	3
COMS 405	Communication Issue Management	3
COMS 482	Public Relations Campaigns	3
CRIM 250	Introduction to the Criminal Justice System	3
CRIM 317	Police Culture	3
CRIM 385	Contemporary Legal Issues in the Criminal Justice System	3
CRIM 388	Sociology of Punishment	3
CRIM 404	Crime and Justice Policies	3
CVM 492	Media Law and Ethics	3
ECON 101	Introduction to Economics	3
ECON 102	Economic History of the U.S.	3
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
ENG 390	Professional Writing	3
GEO 345	Global Environmental Sustainability	3
GEO 349	GIS 1	3
GEO 351	GIS 2	3
GEO 405	Conservation of Natural Resources	3
GEO 455	GIS Applications	3
GST 273	Introduction to Gender Studies	3
GST 333	Women and Partner Violence	3
GST 335	Families in Modern Society	3
GST 350	Sex and Gender	3
HST 261	American History since 1865	3
HST 306	America 1939 to Present	3
HST 344	African American History	3
HST 345	Women in American History	3
HST 352	History of Appalachia	3
HST 353	History of Kentucky	3
HST 356	Struggles for Reform in America	3
HST 357	United States Urban History	3
IST 345	Global Health	3
IST 346	Global Environmental Sustainability	3
IST 350	Communication, Culture and Diversity	3
LGS 200	Law and Individual Rights	3
LGS 210	Introduction to Law and Ethics	3
LGS 355	Administrative Law	3
LGS 370	History of American Law	3
MNGT 201	Principles of Management	3
NURS 345	Global Health	3
NURS 361	Leadership for the Health Care Professional	3
NURS 430	Health Disparities	3
PHIL 103	Beginning Ethics	3
PHIL 303	Ethics	3
POLS 242	State and Local Government	3
POLS 314	American Political Thought	3
POLS 322	Courts and Civil Liberties	3
POLS 324	Environmental Law and Policy	3
POLS 325	Federalism and the Constitution	3
POLS 328	Law, Government and Privacy in the Internet Age	3
POLS 329	Comparative Constitutional Law and Politics	3
POLS 342	The American Presidency	3
POLS 343	Political Parties and Elections	3
POLS 344	Kentucky Government	3
POLS 345	Congress and the Federal Bureaucracy	3
POLS 350	Political Behavior	3
POLS 353	Public Personnel Administration	3
POLS 354	African-American Politics	3
POLS 355	Women and Politics	3
POLS 381	Evolution of the U.S. Intelligence Community	3
POLS 382	Intelligence Process	3
POLS 383	Counterintelligence	3
POLS 384	Intelligence Analysis	3
POLS 385	Terrorism and Political Violence	3
POLS 386	Comparative Counterterrorism	3
POLS 387	National Security Strategy	3
POLS 498	Local, State, National and International Government Internship	3-15
PSY 353	Industrial/Organizational Psychology	3
SOC 300	Class, Power, and Privilege	3
SOC 323	Urban Sociology	3
SOC 354	Individual and Society	3
SOC 426	Communities	3
SOC 456	Organizations in Contemporary Society	3
SOC 459	Social Change in Appalachia	3
SOC 461	Sociology of the Law	3
SWK 340/GST 340	Introduction to Mental Health and Mental Illness	3
SWK 365	Grant Development	3
		Subtotal: 6

Total Credit Hours: 24

Intelligence Studies Certificate

Certificate Requirements

Core

POLS 381	Evolution of the U.S. Intelligence Community	3
POLS 382	Intelligence Process	3
POLS 383	Counterintelligence	3
POLS 384	Intelligence Analysis	3
		Subtotal: 12

Electives - Choose one category

Students must complete a minimum 12 credit hours (4 courses) from one of the following five categories:

Intelligence Collection and Analysis

CS 303	Data Structures	3
CS 310	Algorithms and Advanced Data Structures	3
CS 360	Operating Systems	3
CS 420	Data Mining Concepts	3
CS 480	Computer Security	3
CS 485	Network Security	3
GEO 349	GIS 1	3
GEO 351	GIS 2	3
GEO 455	GIS Applications	3
MATH 303	Data Structures	3
MATH 320	Information Theory and Codes	3
MATH 353	Statistics	3
MATH 355	Operations Research	3
MATH 453	Concepts in the Design of Experiments	3
MATH 455	Linear Statistical Models	3
MATH 456	Nonparametric Statistics	3
POLS 200	Methods of Political Inquiry	3
POLS 410	Seminar in Political Theory	3
SOC 450	Sociological Research	3
SOC 451	Quantitative Data Analysis	3
SOC 455	Qualitative Research Methods	3
		Subtotal: 12

Threat Specialist

CRIM 316	Global Crime and Terrorism	3
HST 346	United States Foreign Relations	3
HST 350	Violence in America	3
POLS 328	Law, Government and Privacy in the Internet Age	3
POLS 338	Politics of Transition	3
POLS 362	Current World Problems	3
POLS 385	Terrorism and Political Violence	3
POLS 387	National Security Strategy	3
POLS 388	Comparative Foreign Policy	3
POLS 420	Seminar in Public Law	3
POLS 440	Seminar in American Politics	3
PPOL 399	Selected Topics in Public Policy	3
SOC 316	Global Crime and Terrorism	3
		Subtotal: 12

Regional Analysis

HST 321	The Middle East	3
HST 324	Modern China	3
HST 375	Twentieth Century Asian Wars	3
IST 312	Islamic Cultures of Africa	3
IST 321	Asian Philosophy	3
IST 341	Latin American Culture and Civilization	3
IST 372	Modern China	3
IST 374	The Middle East	3
PHIL 320	Asian Philosophy	3
POLS 319	Islamic Political Thought	3
POLS 329	Comparative Constitutional Law and Politics	3
POLS 331	Politics of the Middle East and North Africa	3
POLS 332	Politics of Latin America and the Caribbean	3
POLS 334	Politics of Russia and Eastern Europe	3
POLS 334	Politics of Russia and Eastern Europe	3
POLS 368	Human Rights and Global Justice	3
POLS 369	Political Geography	3
POLS 386	Comparative Counterterrorism	3
POLS 430	Seminar in Comparative Politics	3
SPA 306	Latin American Culture and Civilization	3
		Subtotal: 12

Science and Technology

ASTR 311	Astrophysics I: Stars and Stellar Evolution	3
ASTR 312	Astrophysics II: Galaxies and Cosmology	3
ASTR 324	Radio Astronomy	3
ASTR 431	Space Plasma Physics	3
ASTR 460	High Energy Astrophysics	3
BIOL 317	Principles of Microbiology	4
BIOL 380	Cell Biology	3
BIOL 427	Pathogenic Microbiology	3
BIOL 428	Virology	3
CHEM 301	Fundamentals of Biochemistry	4
CHEM 326	Organic Chemistry I	4
CHEM 327	Organic Chemistry II	4
CHEM 360	Analytical Chemistry	3
CHEM 439	Cooperative Education	1-8
CHEM 460	Instrumental Analysis	5
EEC 344	Wireless Communications	3
EEC 400	Digital Signal Processing I	3
EEC 444	Satellite Communications	3
EEC 450	Digital Signal Processing II	3
PHYS 350	Nuclear Science	4
PHYS 353	Modern Physics I	4
PHYS 354	Modern Physics II	3
PHYS 361	Fundamentals of Electronics	3
PHYS 410	Solid State Physics	3
PHYS 452	Nuclear Physics	3
SSE 340	Digital Control Systems for Space Applications	4
SSE 360	Advanced Space Systems	3
SSE 442	RF/Microwave Systems & Antennas	3
SSE 460	Spacecraft Sensors and Remote Sensing	3
		Subtotal: 12-16

Global Finance and Governance

ACCT 485	Forensic Accounting	3
CIS 311	Management Information Systems	3
CIS 322	Systems Security and Information Assurance	3
CIS 340	Data Networking Systems	3
ECON 447	International Economics	3
FIN 325	Bank Management	3
FIN 325	Bank Management	3
FIN 485	International Finance	3
POLS 344	Kentucky Government	3
POLS 351	Public Administration	3
POLS 353	Public Personnel Administration	3
POLS 361	Globalization and its Discontents	3
POLS 365	United Nations and World Organizations	3
POLS 367	Politics of International Economic Relations	3
		Subtotal: 12

Total Credit Hours: 24-28

Global Studies

Global Studies prepares students to work within and understand our global community, international cultures and globalization. It prepares students

for employment opportunities that require a greater understanding of international affairs and economic trends.

Global Studies Major

Program Competencies

1. **Knowledge of Diversity**: Gain knowledge of the diversity of people, regions, and culture in the contemporary world.
2. **Interdisciplinary Analytical Skills**: Develop and apply interdisciplinary analytical skills.
3. **Assess Current Trends**: Assess current trends in the globalization of human activity.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

Core Requirements

IST 101	Introduction to International Studies	3
IST 250	International Culture and Diversity	3
IST 260	Globalization	3
IST 300	World Geography	3
IST 323	Global Culture	3
IST 327	International Travel and Tourism	3
IST 346	Global Environmental Sustainability	3

Subtotal: 21

Choose one of the following:

IST 309	Study Abroad for International Studies	3
IST 401	Seminar in International Studies	3

Subtotal: 3

Electives

Choose three hours from the following:

IST 197	World Languages I	3
FRN 101	Beginning French I	3
SPA 101	Spanish Language and Culture I	3

Subtotal: 3

Choose three hours from the following:

IST 198	World Languages II	3
FRN 102	Beginning French II	3
SPA 102	Spanish Language and Culture II	3

Subtotal: 3

Choose three hours from the following:

ART 263	World Arts	3
FRN 201	Intermediate French	3
GEO 320	Latin America	3
HST 271	World History Since 1500	3
IST 308	Internship in International Studies	1-3
IST 315	International Studies Foundations	3
IST 316	International Studies Approaches	3
IST 322	Global Ideologies	3
IST 326	Cuba and the Caribbean	3
IST 328	Africa	3
IST 383	Asia	3
IST 385	The Middle East	3
IST 399	Selected Topics in Global Studies	3
IST 476	Directed Studies	1-3
POLS 230	Introduction to Comparative Politics	3
POLS 262	U.S. Foreign Policy	3
POLS 319	Islamic Political Thought	3
POLS 331	Politics of the Middle East and North Africa	3
POLS 337	Politics of Asia	3
POLS 362	Current World Problems	3
SOC 316	Global Crime and Terrorism	3
SPA 201	Intermediate Spanish I	3

Subtotal: 3

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Global Studies Minor

Program Competencies

Students will:

1. Appreciate the diversity of people and culture in the world today.
2. Gain knowledge of global population and economic trends in various world regions.
3. Understand how human activities and cultural forces shape current events.
4. Develop and apply interdisciplinary analytical skills.
5. Assess and appraise current trends and issues in the globalization of human activity.

Global Studies Minor Requirements

Core Requirements

IST 101	Introduction to International Studies	3
IST 250	International Culture and Diversity	3
IST 260	Globalization	3
IST 300	World Geography	3
IST 323	Global Culture	3
IST 327	International Travel and Tourism	3
IST 346	Global Environmental Sustainability	3

Subtotal: 21

Total Credit Hours: 21

Legal Studies

The legal studies program is for students who are interested in law and who plan to pursue a career as a paralegal, or a law degree in law school, or work in career fields where the knowledge of law and legal procedures will be valuable. The Bachelor of Arts in Legal Studies combines the advantages of a liberal arts education with the development of the professional skills needed to assist attorneys in law offices, courts, government agencies, and work in banks, health care, social work and most areas of business.

The legal studies major and area degrees also prepare students with the career competencies to work as a professional paralegal and are approved by the American Bar Association (ABA). Only about 30 percent of such programs are approved by the ABA. The minor in legal studies is an excellent complement to other majors, but is not intended to fully prepare students as professional paralegals, and therefore, the minor is not approved by the ABA.

Note: Completion of this program or receipt of a BA degree in Legal Studies does not entitle one to practice law or render legal advice or services in Kentucky except as provided by law. See Kentucky Supreme Court Rule 3.700 and Kentucky Revised Statute 524.130.

Students wishing to pursue law school can select from a variety of majors and minors, including legal studies. Those who choose a major other than legal studies are strongly encouraged to consider the legal studies minor. The legal studies instructors are attorney-professors and the pre-law advisors for all MSU students interested in pursuing law school. They provide information about the law school admissions process, including the Law School Admissions Test (LSAT), and legal career opportunities.

Legal Studies Area – Bachelor of Arts

All students in the Legal Studies Area must earn a grade of "C" or higher in each course taken that has an LGS course prefix. Students may not retake more than two LGS courses to meet this requirement, and may only retake a course once to meet the requirement. Students must also obtain an overall 2.25 GPA in the Legal Studies Area in order to complete the program requirements for the degree.

Program Competencies

Students are expected to:

1. Know the structure and relationship of local, state, and national governments; laws; and the American court system and procedures.
2. Know the roles of attorneys and paralegals in the delivery of legal services, and know and apply the ethical rules and laws that govern non-lawyers, paralegals, and attorneys in the delivery of legal services.
3. Know and apply fundamental principles of law in specialized substantive areas of law.
4. Conduct and update relevant legal research of primary and secondary resources using electronic databases, the internet, and print materials.
5. Function effectively within the context of the modern law office using up-to-date technologies to create legal forms, documents, and summaries to assist attorneys in the practice of law.
6. Communicate effectively with a variety of audiences.
7. Analyze, recognize, investigate and coherently summarize legal issues and relevant facts.

Assessment

1. Senior capstone project
2. Internship evaluations
3. Employment and graduate surveys
4. Legal memoranda, documents and pleadings

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Legal Studies Core Requirements

LGS 210	Introduction to Law and Ethics	3
LGS 321	Legal Research and Writing I	3
LGS 325	Pretrial Practice	3
LGS 332	Property Law	3
LGS 334	Torts, Personal Injury Litigation and Insurance Law	3
LGS 335	Contracts and the Uniform Commercial Code	3
LGS 340	Criminal Law and Procedure	3
LGS 370	History of American Law	3
LGS 400	Law and Society Seminar	3
LGS 421	Legal Research and Writing II	3
LGS 425	Trial Practice	3
LGS 490	Legal Studies Internship I	3-6
LGS 499C	Senior Paralegal Practice Seminar	3
		Subtotal: 39

Electives

Choose 12 hours from the following approved electives:

LGS 305	Legal Reasoning	1-3
LGS 333	Family Law	3
LGS 336	Employment Law	3
LGS 337	Corporate Law	3
LGS 345	Debtor/Creditor Relations	3
LGS 355	Administrative Law	3
LGS 360	Special Legal Topics	1-3
LGS 380	Global Legal Perspectives	1-3
LGS 390	Legal Studies Experiential Learning Lab	1
LGS 436	Wills, Trusts, and Estates	3
LGS 476	Special Problems in Legal Studies	1-3
LGS 495	Legal Studies Internship II	1-3
		Subtotal: 12

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Legal Studies Major – Bachelor of Arts

All students in the Legal Studies Major must earn a grade of "C" or higher in each course taken that has an LGS course prefix. Students may not retake more than two LGS courses to meet this requirement, and may only retake a course once to meet the requirement. Students must also obtain an overall 2.25 GPA in the Legal Studies Major in order to complete the program requirements for the degree.

Program Competencies

Students are expected to:

1. Know the structure and relationship of local, state, and national governments; laws; and the American court system and procedures.
2. Know the roles of attorneys and paralegals in the delivery of legal services, and know and apply the ethical rules and laws that govern non-lawyers, paralegals, and attorneys in the delivery of legal services.
3. Know and apply fundamental principles of law in specialized substantive areas of law.
4. Conduct and update relevant legal research of primary and secondary resources using electronic databases, the internet, and print materials.
5. Function effectively within the context of the modern law office using up-to-date technologies to create legal forms, documents, and summaries to assist attorneys in the practice of law.
6. Communicate effectively with a variety of audiences.
7. Analyze, recognize, investigate and coherently summarize legal issues and relevant facts.

Assessment

1. Senior capstone project
2. Internship evaluations
3. Employment and graduate surveys
4. Legal memoranda, documents and pleadings

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

Legal Studies Major Requirements

LGS 210	Introduction to Law and Ethics	3
LGS 321	Legal Research and Writing I	3
LGS 325	Pretrial Practice	3
LGS 332	Property Law	3
LGS 334	Torts, Personal Injury Litigation and Insurance Law	3
LGS 335	Contracts and the Uniform Commercial Code	3
LGS 340	Criminal Law and Procedure	3
LGS 421	Legal Research and Writing II	3
LGS 425	Trial Practice	3
LGS 490	Legal Studies Internship I	3-6
LGS 499C	Senior Paralegal Practice Seminar	3
		Subtotal: 33

Electives

Choose six hours from the following approved electives (at least three hours must be from courses with an LGS prefix):

LGS 305	Legal Reasoning	1-3
LGS 333	Family Law	3
LGS 336	Employment Law	3
LGS 337	Corporate Law	3
LGS 345	Debtor/Creditor Relations	3
LGS 355	Administrative Law	3
LGS 360	Special Legal Topics	1-3
LGS 370	History of American Law	3
LGS 380	Global Legal Perspectives	1-3
LGS 390	Legal Studies Experiential Learning Lab	1
LGS 400	Law and Society Seminar	3
LGS 436	Wills, Trusts, and Estates	3
LGS 476	Special Problems in Legal Studies	1-3
LGS 495	Legal Studies Internship II	1-3
POLS 321	Constitutional Law: Governmental Powers	3
POLS 322	Courts and Civil Liberties	3
POLS 324	Environmental Law and Policy	3
POLS 329	Comparative Constitutional Law and Politics	3
		Subtotal: 6

Minor

All majors must have a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Legal Studies Minor

The minor provides excellent preparation for students interested in attending law school, or who wish to increase their marketability in other career fields. The legal studies minor also provides students from a variety of majors the opportunity to study and share a common interest in the law. Students learn how to conduct legal research using electronic databases, the Internet and the print collection of legal resources. Students are required to study the basic substantive areas of law, as well as court procedure.

As previously noted, the minor in legal studies is an excellent complement to other majors, but is not intended to fully prepare students as professional paralegals, and therefore, is not approved by the ABA.

All students in the Legal Studies minor must earn a grade of "C" or higher in each LGS course taken. Students may not retake more than two LGS courses to meet this requirement, and may only retake a course once to meet the requirement. Students must also obtain an overall 2.25 GPA in the Legal Studies minor in order to complete the program requirements for the minor.

Program Competencies

Students are expected to possess:

1. The ability to read complex legal documents with understanding and to identify the legal issues at stake in them.
2. The ability to identify, isolate, and analyze critically legal arguments as they occur in writing and in speech.
3. The ability to conduct thorough legal research, using standard reference materials (such as Westlaw and the MSU library's print collection of legal reference materiel), in accordance with best practices in the field.

Legal Studies Minor Requirements

Core Requirements

LGS 210	Introduction to Law and Ethics	3
LGS 321	Legal Research and Writing I	3
LGS 325	Pretrial Practice	3
LGS 335	Contracts and the Uniform Commercial Code	3
		Subtotal: 12

Electives

Choose nine hours from the following (at least six hours must have a LGS prefix):

LGS 305	Legal Reasoning	1-3
LGS 332	Property Law	3
LGS 333	Family Law	3
LGS 334	Torts, Personal Injury Litigation and Insurance Law	3
LGS 336	Employment Law	3
LGS 337	Corporate Law	3
LGS 340	Criminal Law and Procedure	3
LGS 345	Debtor/Creditor Relations	3
LGS 355	Administrative Law	3
LGS 360	Special Legal Topics	1-3
LGS 370	History of American Law	3
LGS 380	Global Legal Perspectives	1-3
LGS 390	Legal Studies Experiential Learning Lab	1
LGS 400	Law and Society Seminar	3
LGS 421	Legal Research and Writing II	3
LGS 425	Trial Practice	3
LGS 436	Wills, Trusts, and Estates	3
LGS 476	Special Problems in Legal Studies	1-3
POLS 321	Constitutional Law: Governmental Powers	3
POLS 322	Courts and Civil Liberties	3
POLS 324	Environmental Law and Policy	3
POLS 329	Comparative Constitutional Law and Politics	3
		Subtotal: 9

Total Credit Hours: 21

Philosophy

The mission of the philosophy program is to facilitate students' development into persons with open, flexible, creative and critical minds, primarily through the development of their skills of interpreting and critically evaluating ideas, beliefs, values and conceptions of the world.

Philosophy students will gain philosophical knowledge about philosophical terms, figures, ideas and arguments. Students will learn to formulate their own ideas about these concepts and express these ideas in writing and in discussion with classmates and professors. Philosophy students will also learn to identify and analyze philosophical arguments.

Study in philosophy will benefit students with diverse areas of interest. Students learn a variety of portable skills that studies have shown are valued by employers of all types.

Philosophy Major - Bachelor of Arts

Program Competencies

Goal 1: Philosophical Understanding: Students will accurately describe the history, nature, and shape of classical philosophical questions.

Goal 2: Philosophical Analysis: Students will assess philosophical arguments for logical cogency.

Goal 3: Philosophical Clarity: Students will communicate clearly their understanding of philosophical issues and arguments.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

Philosophy Core Requirements

PHIL 100	Beginning Philosophy	3
PHIL 103	Beginning Ethics	3
PHIL 106	Beginning Logic	3
PHIL 355	Ancient and Medieval Philosophy	3
PHIL 356	Modern and Contemporary Philosophy	3
PHIL 499C	Senior Seminar in Philosophy	3
		Subtotal: 18

Philosophy Electives

Choose six hours from the following:

PHIL	400-level electives	6
		Subtotal: 6

Choose nine hours (three courses) from the following:

PHIL 303	Ethics	3
PHIL 307	Philosophy of Religion	3
PHIL 308	Philosophy of the Arts	3
PHIL 313	American Philosophy	3
PHIL 320	Asian Philosophy	3
PHIL 321	The Meaning of Life	3
PHIL 333	Animal and Environmental Ethics	3
PHIL 341	Philosophy and Death	3
PHIL 351	Philosophy of Love and Sex	3
PHIL 361	Social and Political Philosophy	3
PHIL 389	Honors Seminar in Philosophy	3
PHIL 399	Special Class	1-3
PHIL 400	Philosophy of Science	3
PHIL 403	Ethical Theory	3
PHIL 410	Current Philosophy	3
PHIL 412	Symbolic Logic	3
PHIL 420	Metaphysics	3
PHIL 430	Epistemology	3
PHIL 476	Special Problems	1-3
		Subtotal: 9

No more than three hours of PHIL 476 can count toward the fulfillment of the requirements for the major.

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Philosophy Minor

Philosophy Minor Requirements

Core Requirements

PHIL 100	Beginning Philosophy	3
PHIL 106	Beginning Logic	3
PHIL 355	Ancient and Medieval Philosophy	3
PHIL 356	Modern and Contemporary Philosophy	3
		Subtotal: 12

Electives

Choose nine hours (three courses) from Group A:

PHIL 303	Ethics	3
PHIL 307	Philosophy of Religion	3
PHIL 308	Philosophy of the Arts	3
PHIL 313	American Philosophy	3
PHIL 320	Asian Philosophy	3
PHIL 321	The Meaning of Life	3
PHIL 333	Animal and Environmental Ethics	3
PHIL 341	Philosophy and Death	3
PHIL 351	Philosophy of Love and Sex	3
PHIL 361	Social and Political Philosophy	3
PHIL 389	Honors Seminar in Philosophy	3
PHIL 399	Special Class	1-3
PHIL 400	Philosophy of Science	3
PHIL 403	Ethical Theory	3
PHIL 410	Current Philosophy	3
PHIL 412	Symbolic Logic	3
PHIL 420	Metaphysics	3
PHIL 430	Epistemology	3
PHIL 476	Special Problems	1-3
		Subtotal: 9

No more than three hours of either PHIL 476 or REL 476 can count toward the fulfillment of the requirements for an area, major or minor.

Total Credit Hours: 21

Appalachian Studies Minor

Appalachian Studies Minor Requirements

Core Requirements

APS 201	Introduction to Appalachia	3
		Subtotal: 3

Electives

Choose 12 hours (four courses) from the following:

ART 468	Appalachian Arts	3
ENG 360	Appalachian Literature	3

GEO 245	Natural Landscapes of Appalachia	3
HST 352	History of Appalachia	3
MUSH 261	Global Musical Experience	3
SOC 459	Social Change in Appalachia	3
		Subtotal: 12

Choose six hours (two courses) from the following:

(May include courses not already selected above)

AGR 319	Herbs	3
BIOL 318	Local Flora	3
ENG 394	Language and Society	3
GEO 341	Appalachia	3
GEO 344	Kentucky	3
GEO 345	Global Environmental Sustainability	3
POLS 344	Kentucky Government	3
HST 353	History of Kentucky	3
MUSH 338	Traditional Music History I	3
MUSH 339	Traditional Music History II	3
RAPP 202	Basic Computer Techniques in Regional Analysis	3
RAPP 289	Regional Natural History	3
MUSP 138A	Private Bluegrass Banjo	1-4
MUSP 138B	Private Old Time Banjo	1-4
MUSP 138C	Private Mandolin	1-4
MUSP 138D	Private Traditional Guitar	1-4
MUSP 138E	Private Country Electric Guitar	1-4
MUSP 138F	Private Upright Traditional Bass	1-4
MUSP 138G	Private Dobro	1-4
MUSP 138H	Private Mountain Dulcimer	1-4
MUSP 138I	Private Bluegrass and Country Fiddle	1-4
MUSP 138J	Private Old Time Fiddle	1-4
MUSP 138K	Private Celtic Fiddle	1-4
MUSP 138L	Private Special Traditional Instruction	1-4
MUSP 138V	Private Traditional Voice	1-4
		Subtotal: 6

Total Credit Hours: 24

Canadian Studies Minor

Canadian Studies Minor Requirements

Core Requirements

FRN 101	Beginning French I	3
FRN 102	Beginning French II	3
IST 101	Introduction to International Studies	3
IST 301	Education Abroad Experience	1
IST 401	Seminar in International Studies	3
		Subtotal: 13

Note: Canadian-related studies may include IST 301 for a two-week period of study in Canada and IST 401 for a Canada-related seminar subject in comparative and international perspective.

Canadian Studies Required Courses

IST 330	Perspectives on Canada	3
		Subtotal: 3

Canadian Studies Electives

Choose six hours (two courses) from the following:

IST 331	History of Canada	3
IST 332	First Nations of Canada	3
IST 333	Government and Politics of Britain and Canada	3
IST 335	Political Economy and Environmental Policy in Canada	3
IST 336	Politics of the North American Auto Industry	3
IST 430	Canadian Parliament Internship	3
		Subtotal: 6

Total Credit Hours: 22

Geography Minor

Appropriate educational experiences and training are provided to prepare students for entry into careers in public and private sector business and industry, government service, planning and resource management.

Geography, by its very nature, has a global perspective, and most of the courses offered contribute to students' understanding of the diversity of human cultures on the planet.

Geography Minor Requirements

Core Requirements

GEO 100	The Human World	3
GEO 103	Physical Geography	3
GEO 201	Map Interpretation and Analysis	3
GEO 241	United States and Canada	3
		Subtotal: 12

Electives

GEO	Three electives	9
		Subtotal: 9

Total Credit Hours: 21

Interdisciplinary Research Methods Minor

The Interdisciplinary Research Methods minor will provide students with a robust training in research methodology, data collection, descriptive and advanced statistical data analysis, spatial analysis, and data communication skills. Students will learn to use industry-standard software for online survey design and collection, and data and spatial analysis techniques. Students are responsible for reviewing prerequisite courses or seeking permission of instructor for enrollment in some courses. Students completing this minor may not be awarded the Certificate in Research and Analytical Skills.

IRM Minor Requirements

Core Requirements

COMS 200	Strategic Communication Research	3
GEO 349	GIS 1	3
POLS 200	Methods of Political Inquiry	3
SOC 450	Sociological Research	3
		Subtotal: 12

Electives

Choose nine hours (three courses) from the following:

CIS 385	Introduction to Business Analytics	3
GEO 351	GIS 2	3
HST 300	Practicing History	3
PHIL 106	Beginning Logic	3
PHIL 400	Philosophy of Science	3
PPOL 205	Conducting Public Policy Research	3
PSY 281	Psychological Research Methods	3
PSY 282	Psychological Statistics	3
RAPP 202	Basic Computer Techniques in Regional Analysis	3
SOC 451	Quantitative Data Analysis	3
SOC 455	Qualitative Research Methods	3
UTCH 360	Research Methods	3
		Subtotal: 9

Total Credit Hours: 21

Military History and Policy Certificate

Certificate Requirements

Core

POLS 262	U.S. Foreign Policy	3
HST 347	American Military History	3
		Subtotal: 6

Electives

Complete nine hours (at least three credit hours from HST and three credit hours from POLS) from the following:

HST 304	The Civil War and Reconstruction	3
HST 330	Special Topics in Public History	3
HST 351	Vietnam and Watergate	3
HST 372	Revolutionary Europe	3
HST 375	Twentieth Century Asian Wars	3
POLS 337	Politics of Asia	3
POLS 360	International Relations	3
POLS 362	Current World Problems	3
POLS 381	Evolution of the U.S. Intelligence Community	3
POLS 382	Intelligence Process	3
POLS 383	Counterintelligence	3
POLS 384	Intelligence Analysis	3
POLS 385	Terrorism and Political Violence	3
SOC 319	Responding to Military and Veteran Populations	3
		Subtotal: 9

Total Credit Hours: 15

Research and Analytical Skills Certificate

A certificate in Research and Analytical Skills will provide students with a robust training in research methodology, date collection, descriptive and advanced statistical data analysis, spatial analysis, and data communication skills. Students will learn to use industry-standard software for online survey design and collection, and data and spatial analysis techniques.

The certificate can be completed in one academic year. Students may not earn both the Interdisciplinary Research Minor and this certificate. Students must have an area or major and minor on file, or have earned a college degree. Completion of a certificate program does not replace a minor. Students are responsible for reviewing prerequisite courses or seeking permission of instructor for enrollment in some courses. The certificate will be awarded upon degree completion.

Certificate Requirements

Core

Complete the following:

COMS 200	Strategic Communication Research	3
GEO 349	GIS 1	3
POLS 200	Methods of Political Inquiry	3
SOC 450	Sociological Research	3
		Subtotal: 12

Electives

Choose three hours from the following:

CIS 385	Introduction to Business Analytics	3
GEO 351	GIS 2	3
HST 300	Practicing History	3
PHIL 400	Philosophy of Science	3
SOC 451	Quantitative Data Analysis	3
SOC 455	Qualitative Research Methods	3
UTCH 360	Research Methods	3
		Subtotal: 3

Total Credit Hours: 15

Music Theatre and Dance Department

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Music

Music Faculty

J. Baker, S. Baker, L. Baruth, E. Brown, B. Cantrell, J. Croushore, D. Dale, R. Escalante, G. Ginn, D. Lewis, B. Mason, R. McGillicuddy, B. Morris, D. Oyen, M. Paise, T. Pappas, R. Prindle, N. Stites, J. Wells, G. Wing

Music performance opportunities for all Morehead State University students are virtually unlimited. Regardless of the major area of study, students may continue to make music at MSU by becoming active in one of the department's many large and small ensembles. Some of the groups available include the MSU Marching Band, Symphony Band, Concert Band, Jazz Ensemble, Concert Choir, University Chorus, Chamber Singers, OperaWorks, Jazz Vocal Ensemble, Black Gospel Ensemble, Traditional Music Ensemble and numerous other small ensembles. All ensembles and private lessons are scheduled classes that earn University credit.

Mission Statement

The mission of the Music Unit is to offer a comprehensive range of baccalaureate programs and to develop the personal and professional goals of our students. The Music Unit endeavors to educate students for success in a global environment, engage in scholarship, promote diversity of people and ideas, foster innovation, as well as collaborate and promote creative thinking. We serve our communities as a way to contribute to educating and improving the quality of life for our citizens. The Music Unit also seeks to provide an environment in which students may interact with other students and faculty for the stimulation of intellectual and creative growth; to contribute to the quality of campus life through musical performances; to meet the cultural, educational, and social needs of the service region through musical performances, school visitations, workshops, and clinics; to develop in all students professional competencies as outlined in The National Standards for the Arts; and to offer the opportunity for elective experiences in music, both in performance and in academic classes, to all university students.

Entrance Auditions and Placement Assessment

All new and transfer students planning to major or minor in music must audition before the music faculty on their principal performing instrument or voice prior to enrollment. The audition process is used to determine the student's readiness for entry into a music degree program. A scholarship audition may serve as a student's admission audition.

Placement examinations are given in piano prior to enrollment. The results are used for advisement as to course and program enrollment. Credit by examination for courses in the class piano sequences must be validated by the faculty and processed through the Department of Music, Theatre and Dance, the Testing Center and the Office of the Registrar.

Transfer Student Admission

The music major entering the Music, Theatre, and Dance Department by transfer must submit an official transcript of all previous college work. The applicant should be prepared to validate achievements in the areas of applied music, music theory, ear training and sight singing, keyboard proficiency, and the history and literature of music. Resolution of any deficiency must be initiated during the first registration period.

Advising and Programs of Study

Students who are approved for unconditional entry into a music major or minor program must declare their intended program of study. A student who is not ready for entry into a music program may enroll in the prescribed music courses on a probationary basis until performance standards are met. These performance standards must be met by the end of the first academic year of enrollment. Students receive their initial program advising by the Department Chair for Music, Theatre, and Dance and thereafter by their private applied instructor. Students wishing to

choose a different music degree program or principal applied area of study must receive departmental approval. The appropriate members of the music faculty, in consultation with the chair, determine the student's eligibility and suitability for the change and which previously earned credits, if any, apply to the new program of study.

Music Scholarships

Music scholarship awards are available to qualified students as determined through a scholarship audition. These awards serve numerous students annually. All awards are contingent upon admission to the University.

The Music Scholarship Committee considers many criteria before recommending a candidate for a scholarship award including the candidate's performance ability, potential for academic success, anticipated contribution to the program and the needs within the department. Music scholarship awards are renewable for up to four years provided the student meets the expectations of the scholarship agreement.

General Music Requirements and Advisories

Recital Attendance

Attending concerts and recitals is an essential ingredient of a professional musician's training. Attending live performances ensures that all music majors and minors are exposed to a large and varied body of music and provides opportunities to enhance musical learning. Therefore, students are expected to attend concerts and recitals presented on campus as part of the overall study of music at MSU. Each faculty member who teaches private applied music has a grading policy that reflects this attitude and has established expectations for recital attendance. In addition, music students are required to complete MUSM 200/MUSM 400 Student Recital for the prescribed number of semesters with a passing grade (MUSM 200/MUSM 400 is a pass-fail course). Regular attendance at the student recital hour is expected of all music students. The chair of the school maintains attendance records and issues grades.

Piano Proficiency

All candidates for the Bachelor of Music Education, Bachelor of Music and Bachelor of Arts degree with principal applied areas other than keyboard instruments are required to complete the four-semester sequence of class piano (MUSG 123, MUSG 124, MUSG 223, MUSG 224). Non-keyboard major students with previous keyboard experience may qualify for advanced placement in the class piano sequence. Exemption from the class piano sequence requires successful completion of the Piano Proficiency Examination. All students being exempted from one or more levels of class piano will be required to go to the Testing Center to register for credit by examination in order to receive "K" credit on their transcripts for all courses in the sequence for which they are recommended to be exempted. Credit by examination for courses in the class piano sequences must be validated by the faculty and processed through the Music, Theatre, and Dance Department, the Testing Center and the Office of the Registrar. Students will not be allowed to substitute other courses or private applied piano lessons for courses in the class piano sequence.

Ensembles

All students are required to enroll each semester in residence in the ensemble course appropriate to the chosen program of study, results of a placement audition, private applied instrument area and class standing. Students who are in residence for more than four full academic years are required to enroll for additional appropriate ensemble credit hours beyond those listed in the program requirements. These ensemble enrollment requirements are considered the minimum for music majors; all music students are encouraged to participate in additional large and small ensembles, including chamber and jazz ensembles, in order to receive a more extensive performance experience and professional preparation.

Private Applied Music

Music majors and minors are required to designate a principal area of private applied music study and enroll each semester in residence for credit in this area as required by the program of study. Students who are in residence for more than four full academic years are required to enroll for additional credit hours beyond those listed in the program requirements. Credit may also be earned in secondary applied areas with permission of the instructor. Private applied in principal instrument requires a performance examination before a jury of faculty members in their principal applied area at the end of each semester, except as excused by the private applied instructor after recital appearances. In addition, music major and minor students must register for MUSP 200/MUSP 400 — Performance Class concurrently with private applied lessons in the principal applied area. Performance class receives no credit and is graded pass/fail, but attendance and performance in this course may affect the student's grade in private applied lessons.

Credit hours for private applied music are variable. Normally, students enroll for two to three hours of credit depending on the requirements of the degree program and the advice of the private applied instructor. Students studying a secondary applied instrument normally enroll for one credit hour. Students are expected to practice at least one-hour per day for each credit hour earned in private applied lessons.

One credit hour (MUSP 1XX and 3XX) is intended for non-major on that instrument. A 25-minute lesson per week for the entire semester implies one hour of personal practice per day by the student. Probationary music students register for this level and credit hours earned in MUSP 1XX does not apply toward music major degree requirements. Probationary music students may be required by their instructor to register concurrently for MUSP 200 Performance Class.

Two credit hours (MUSP 2XX, 4XX) - Major on that instrument only. A 50-minute lesson per week for the entire semester, implies two hours of personal practice per day by the student. Concurrent enrollment in MUSP 200/400 required.

Three credit hours (MUSP 2XX, 4XX) - Major on that instrument only. A 50-minute lesson per week for the entire semester, implies three hours of personal practice per day by the student. Concurrent enrollment in MUSP 200/400 required.

Four credit hours (MUSP 2XX, 4XX) - Major on that instrument only. A 50-minute lesson per week for the entire semester, implies four hours of personal practice per day by the student. Concurrent enrollment in MUSP 200/400 required.

Degree Recitals and Hearings - Senior Project

Students seeking the Bachelor of Music Education or Bachelor of Music degrees must complete the senior recital on their principal performing instrument. Successful completion of the senior recital satisfies the integrative component in the general education curriculum as the capstone course for the degree. Music Education majors complete MUSP 499C — Senior Recital, a three credit hour course that requires a formal recital with an accompanying research paper and oral presentation covering the works and composers to be performed. Students in the Bachelor of Music program complete MUSP 360 — Junior Recital, a two credit hour course that requires a formal recital, and MUSP 499C — Senior Recital, a three credit hour course that requires a formal recital. The senior recital also requires an accompanying research paper and oral presentation covering the works and composers to be performed. Prior to scheduling a recital, the proposed program must be presented for approval by a committee of applied faculty. Students receive approval by successfully completing a recital hearing. The recital hearing forms signed by the appropriate faculty must be filed in the student's files in the department's office. A copy of the

accompanying paper/presentation media must also be filed in the student's files in the department's office. The Senior Project course, MUSW 499C, is an option for music BA students only. This course involves a performance component as well as a component involving the student's academic interests. This project is required to have writing and presentation activities. The performance and academic components can be related. The project is to be developed by the student and his/her private applied teacher. The appropriate performance area faculty must sign the senior project approval form. This form and attached proposal narrative must be filed in the student's file in the department office. A copy of the accompanying paper/presentation media must also be filed in the student's files in the department's office.

Note: Recital hearing form and senior project approval form must be submitted with any performance program (in electronic format) to the department's office no later than two weeks prior to the performance. If this information is not received by this time, the performance will be cancelled from the calendar.

Music Fees

MUSE 215 Microcomputers and Music: $60

MUSP 360 Junior Recital (three credit hours: $45 per credit hour)

MUSP 480 Private Applied Pedagogy: $45 per credit hour

MUSP 499C Senior Recital (three credit hours: $45 per credit hour)

MUSW 499C Senior Project (three credit hours: $45 per credit hour)

Private Applied: $45 per credit hour (1-4 credit hour offerings)

Instrument Rental Fee: $15-$20 per semester (varies on size of instrument)

Locker Rental

One locker per semester or summer session: $10

One locker per academic year: $20

Upper and Lower Division Enrollment

Lower division (100- and 200-level) performance class, student recital and private applied are appropriate for students with freshman and sophomore standing. Upper division (300- and 400-level) performance class, student recital and private applied lessons are appropriate for students with junior or senior standing. A 100-level private applied is designated for non-majors or students admitted as probationary music students. A 300-level private applied is designated for music majors wishing private study on a secondary instrument. All undergraduate students, freshman through senior standing, register for 300-level ensembles.

Upper Division Assessment

Music majors and minors must successfully complete the applied music upper division assessment before enrolling in 400-level private applied courses. The upper division assessment includes an academic component and a performance component. To complete the academic component, students must successfully pass MUSG 124, MUST 233, MUST 236, four semesters each of MUSP 200 and MUSM 200 with a passing grade of "K," either MUSH 171 or MUSH 267, MUSE 207 (BME majors only), and eight credits of 200-level private applied in principal instrument with a grade of "C" or better (BME and BA in Music majors only), or 12 credits of 200-level private applied in principal instrument with a grade of "C" or better (BM majors only). To complete the performance component, students must meet the criteria set for their primary applied area during their end of semester jury performances. The upper division assessment form in the student's principal performance area must be signed by the appropriate faculty and filed in the department's office.

General Education

All undergraduate students must complete a required core of general education courses. Please refer to the general education catalog section for a detailed listing of the 33 credit hours of general education courses common to all baccalaureate programs. Certain requirements in the major programs are met through requirements in the general education course work.

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University.

BME – Bachelor of Music Education

Mission Statement

The Bachelor of Music Education provides students with intensive training in performance, analysis, history, theory, and pedagogical skills in both music and education. Students in this program generally plan to teach in the public schools. The BME program meets the requirements for the Integrated Music P-12 initial certification; the Kentucky license to teach general, instrumental, and vocal music, primary through 12th grade. This program particularly serves the MSU mission of educating students for success and serving communities to improve the quality of life.

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of "C" or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

As an accredited institutional member of the National Association of Schools of Music (NASM), Morehead State University adheres to and complies with the standards of the association. Major categories are

1. **Performance** (technical skills, understanding of repertory, ability to read music, leadership and collaboration skills, keyboard competency, growth in artistry)
2. **Aural Skills and Analysis** (understanding of musical elements, organizational patterns, forms, processes, structures, and historical, cultural, and stylistic contexts)
3. **Composition and Improvisation** (create original music, improvisation)
4. **History and Repertory** (knowledge of music history, acquaintance with repertory outside specialization)
5. **Technology** (how technology serves music field, knowledge of technological developments in specialization)
6. **Synthesis** (combining musical capabilities, value judgements, work with comprehensive repertory, understanding interrelationships and interdependencies of music enterprise)

Assessment

1. Survey of Graduates
2. Performance Recitals
3. Exit Interview
4. Senior Capstone Course

Common Program Requirements

This program is designed for students who are planning for careers as music teachers in public schools. The BME program meets the requirements for the Integrated Music P-12 initial certificate. The Integrated Music P-12 certificate is the Kentucky license to teach general, instrumental, and vocal music, primary through 12th grade levels. All courses taken with the prefix MUSE must be passed with a minimum grade of C. Students must obtain a B average in all courses taken with the prefix EDF or EDUC.

Teacher Certification

In order to fulfill state of Kentucky certification guidelines, the student must complete the departmental and University education requirements. A minimum of 68-70 semester hours in the area of music and 28 hours in professional education must be completed. Also, specific standards must be met for admission to the Teacher Education Program (TEP).

See: BME: Keyboard Track (p. 65), BME: Orchestral Strings Track (p. 66), BME: Percussion Track (p. 67), BME: Voice Track (p. 68), BME: Woodwind and Brasswind Track (p. 68).

BME: Keyboard Track

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

BME Core Requirements

MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
MUST 233	Music Reading III	1
MUST 234	Music Reading IV	1
MUST 236	Music Theory III	2
MUST 237	Music Theory IV	2
MUSC 271	Basic Conducting	2
MUSE 207	Foundations of Music Education	3
MUSE 215	Microcomputers and Music	3
MUSE 325	Materials and Methods for Elementary Grades*	3
MUSH 267	World Cultures Through the Humanities	3
MUSH 361	History of Music I	3
MUSH 362	History of Music II	3
MUSM 200	Student Recital (4 semesters with passing grade of K)	0
MUSM 400	Student Recital (3 semesters with passing grade of K)	0
MUSP 200	Performance Class (4 semesters with passing grade of K)	0
MUSP 400	Performance Class (3 semesters with passing grade of K)	0
MUSP 499C	Senior Recital	3
		Subtotal: 37

Private Applied

MUSP 2XX	Private Applied (4 semesters at 2 credit hours each)	8
MUSP 4XX	Private Applied - Major Instrument (2 semesters at 2 credit hours each)	4
		Subtotal: 12

Professional Education

EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDUC 476	Content Area Literacy*	3
EDSE 416	Clinical Practice*	12
		Subtotal: 21

Choose one of the following subtracks:

Subtrack I: Instrumental Requirements

MUSM 372	Marching Band (4 semesters at 1 credit hour each)	4
MUSC 472	Instrumental Conducting	2
MUSG 211	Class Woodwinds I	1
MUSG 212	Class Woodwinds II	1
MUSG 213	Class Brasswinds I	1
MUSG 214	Class Brasswinds II	1
MUSG 217	Class Percussion I	1
MUSG 226	Class Strings	1
MUSG 239	Class Voice	1
MUSE 376	Instrumental Materials and Methods*	3
MUSE 378	Keyboard Pedagogy	2
		Subtotal: 18

Take three hours from the following:

MUSM 370	Concert Band (3 semesters at 1 credit hour each)	3
	or	
MUSM 371	Symphony Band (3 semesters at 1 credit hour each)	3
		Subtotal: 3

Take two hours from the following:

MUSM 382	Jazz Vocal Ensemble	1
MUSM 391	University Chorus	1
MUSM 392	Concert Choir	1
MUSM 393	Chamber Singers	1
MUSM 394	Operaworks	1
		Subtotal: 2

Music Electives

Choose nine hours from the following:

MUSC 471	Choral Conducting	2
MUSC 472	Instrumental Conducting	2
MUSC 473	Rehearsal Techniques for Jazz Ensembles	2
MUSG 125	Score Reading	1
MUSG 183	Studio Improvisation	1
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSE 479	Marching Band Techniques	2
MUSH 481	Keyboard Literature	3
MUSH 490	School Band Literature	2
MUSH 491	Choral Literature	2
MUSM 345	Keyboard Chamber Music	1
MUSM 387	Accompanying	1
MUSM 389	Keyboard Ensemble	1
MUSP 341	Private Harpsichord	1
MUSP 342	Private Organ	1
MUSP 480	Private Applied Pedagogy	1
		Subtotal: 9

Subtrack II: Vocal Requirements

MUSC 471	Choral Conducting	2
MUSE 375	Vocal Materials and Methods*	3
MUSE 378	Keyboard Pedagogy	2
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSG 240	Diction for Singers I	1
MUSG 241	Diction for Singers II	1
MUSP 340	Private Voice	2
		Subtotal: 13

Take seven hours from the following:

MUSM 382	Jazz Vocal Ensemble	1
MUSM 391	University Chorus	1
MUSM 392	Concert Choir	1
MUSM 393	Chamber Singers	1
MUSM 394	Operaworks	1
		Subtotal: 7

Take three hours from the following:

MUSG 211	Class Woodwinds I	1
MUSG 213	Class Brasswinds I	1
MUSG 217	Class Percussion I	1
MUSG 226	Class Strings	1
		Subtotal: 3

Music Electives

Choose nine hours from the following:

MUSC 471	Choral Conducting	2
MUSC 472	Instrumental Conducting	2
MUSC 473	Rehearsal Techniques for Jazz Ensembles	2
MUSG 125	Score Reading	1
MUSG 183	Studio Improvisation	1
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSE 479	Marching Band Techniques	2
MUSH 481	Keyboard Literature	3
MUSH 490	School Band Literature	2
MUSH 491	Choral Literature	2
MUSM 345	Keyboard Chamber Music	1
MUSM 387	Accompanying	1
MUSM 389	Keyboard Ensemble	1
MUSP 341	Private Harpsichord	1
MUSP 342	Private Organ	1
MUSP 480	Private Applied Pedagogy	1
		Subtotal: 9

Total Credit Hours: 132

BME: Orchestral Strings Track

Program Requirements

Orchestral string music education majors are required to enroll in and participate in all activities of the orchestra. In addition, orchestral string music education majors are required to take two semesters of a choral ensemble (University Chorus, Concert Choir or Chamber Singers).

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

BME Core Requirements

MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
MUST 233	Music Reading III	1
MUST 234	Music Reading IV	1
MUST 236	Music Theory III	2
MUST 237	Music Theory IV	2
MUSC 271	Basic Conducting	2
MUSE 207	Foundations of Music Education	3
MUSE 215	Microcomputers and Music	3
MUSE 325	Materials and Methods for Elementary Grades*	3
MUSH 267	World Cultures Through the Humanities	3
MUSH 361	History of Music I	3
MUSH 362	History of Music II	3
MUSM 200	Student Recital (4 semesters with passing grade of K)	0
MUSM 400	Student Recital (3 semesters with passing grade of K)	0
MUSP 200	Performance Class (4 semesters with passing grade of K)	0
MUSP 400	Performance Class (3 semesters with passing grade of K)	0
MUSP 499C	Senior Recital	3
		Subtotal: 37

Private Applied

MUSP 2XX	Private Applied (4 semesters at 2 credit hours each)	8
MUSP 4XX	Private Applied - Major Instrument (2 semesters at 2 credit hours each)	4
		Subtotal: 12

Professional Education

EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3

EDUC 476	Content Area Literacy*	3
EDSE 416	Clinical Practice*	12
		Subtotal: 21

Orchestral Strings Track Requirements

MUSM 379	Orchestra (1 credit for 7 semesters)	7
MUSC 472	Instrumental Conducting	2
MUSG 123	Class Piano I	1
MUSG 124	Class Piano II	1
MUSG 211	Class Woodwinds I	1
MUSG 212	Class Woodwinds II	1
MUSG 213	Class Brasswinds I	1
MUSG 214	Class Brasswinds II	1
MUSG 217	Class Percussion I	1
MUSG 223	Class Piano III	1
MUSG 224	Class Piano IV	1
MUSG 226	Class Strings	1
MUSG 239	Class Voice	1
MUSE 376	Instrumental Materials and Methods*	3
		Subtotal: 23

Take two hours from the following:

MUSM 382	Jazz Vocal Ensemble	1
MUSM 391	University Chorus	1
MUSM 392	Concert Choir	1
MUSM 393	Chamber Singers	1
MUSM 394	Operaworks	1
		Subtotal: 2

Music Electives

Choose seven hours from the following:

MUSC 471	Choral Conducting	2
MUSC 472	Instrumental Conducting	2
MUSC 473	Rehearsal Techniques for Jazz Ensembles	2
MUSG 125	Score Reading	1
MUSG 183	Studio Improvisation	1
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSE 479	Marching Band Techniques	2
MUSH 481	Keyboard Literature	3
MUSH 490	School Band Literature	2
MUSH 491	Choral Literature	2
MUSM 3XX	(any ensemble)	1
MUSP 341	Private Harpsichord	1
MUSP 342	Private Organ	1
MUSP 480	Private Applied Pedagogy	1
		Subtotal: 7

Total Credit Hours: 132

BME: Percussion Track

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

BME Core Requirements

MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
MUST 233	Music Reading III	1
MUST 234	Music Reading IV	1
MUST 236	Music Theory III	2
MUST 237	Music Theory IV	2
MUSC 271	Basic Conducting	2
MUSE 207	Foundations of Music Education	3
MUSE 215	Microcomputers and Music	3
MUSE 325	Materials and Methods for Elementary Grades*	3
MUSH 267	World Cultures Through the Humanities	3
MUSH 361	History of Music I	3
MUSH 362	History of Music II	3
MUSM 200	Student Recital (4 semesters with passing grade of K)	0
MUSM 400	Student Recital (3 semesters with passing grade of K)	0
MUSP 200	Performance Class (4 semesters with passing grade of K)	0
MUSP 400	Performance Class (3 semesters with passing grade of K)	0
MUSP 499C	Senior Recital	3
		Subtotal: 37

Private Applied

MUSP 2XX	Private Applied (4 semesters at 2 credit hours each)	8
MUSP 4XX	Private Applied - Major Instrument (2 semesters at 2 credit hours each)	4
		Subtotal: 12

Professional Education

EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDUC 476	Content Area Literacy*	3
EDSE 416	Clinical Practice*	12
		Subtotal: 21

Percussion Track Requirements

MUSM 369	Percussion Ensemble (6 semesters at 1 credit hour each)	6
MUSM 372	Marching Band (4 semesters at 1 credit hour each)	4
MUSC 472	Instrumental Conducting	2
MUSG 211	Class Woodwinds I	1
MUSG 212	Class Woodwinds II	1
MUSG 213	Class Brasswinds I	1
MUSG 214	Class Brasswinds II	1
MUSG 226	Class Strings	1
MUSG 239	Class Voice	1
MUSG 123	Class Piano I	1
MUSG 124	Class Piano II	1
MUSG 223	Class Piano III	1
MUSG 224	Class Piano IV	1
MUSE 376	Instrumental Materials and Methods*	3
		Subtotal: 25

Take three hours from the following:

MUSM 370	Concert Band (3 semesters at 1 credit hour each)	3
	or	
MUSM 371	Symphony Band (3 semesters at 1 credit hour each)	3
		Subtotal: 3

Take two hours from the following:

MUSM 382	Jazz Vocal Ensemble	1
MUSM 391	University Chorus	1
MUSM 392	Concert Choir	1
MUSM 393	Chamber Singers	1

MUSM 394	Operaworks	1
		Subtotal: 2

Music Electives

Choose two hours from the following:

MUSC 471	Choral Conducting	2
MUSC 473	Rehearsal Techniques for Jazz Ensembles	2
MUSG 125	Score Reading	1
MUSG 183	Studio Improvisation	1
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSE 479	Marching Band Techniques	2
MUSH 481	Keyboard Literature	3
MUSH 490	School Band Literature	2
MUSH 491	Choral Literature	2
MUSP 341	Private Harpsichord	1
MUSP 342	Private Organ	1
MUSP 480	Private Applied Pedagogy	1
MUSM 3XX	(any ensemble)	1
		Subtotal: 2

Total Credit Hours: 132

BME: Voice Track

Vocal music education majors are required, upon successful audition, to enroll and participate in all activities of the Concert Choir. Students with an unsuccessful audition for Concert Choir enroll in the University Chorus.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

BME Core Requirements

MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
MUST 233	Music Reading III	1
MUST 234	Music Reading IV	1
MUST 236	Music Theory III	2
MUST 237	Music Theory IV	2
MUSC 271	Basic Conducting	2
MUSE 207	Foundations of Music Education	3
MUSE 215	Microcomputers and Music	3
MUSE 325	Materials and Methods for Elementary Grades*	3
MUSH 267	World Cultures Through the Humanities	3
MUSH 361	History of Music I	3
MUSH 362	History of Music II	3
MUSM 200	Student Recital (4 semesters with passing grade of K)	0
MUSM 400	Student Recital (3 semesters with passing grade of K)	0
MUSP 200	Performance Class (4 semesters with passing grade of K)	0
MUSP 400	Performance Class (3 semesters with passing grade of K)	0
MUSP 499C	Senior Recital	3
		Subtotal: 37

Private Applied

MUSP 2XX	Private Applied (4 semesters at 2 credit hours each)	8
MUSP 4XX	Private Applied - Major Instrument (2 semesters at 2 credit hours each)	4
		Subtotal: 12

Professional Education

EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDUC 476	Content Area Literacy*	3
EDSE 416	Clinical Practice*	12
		Subtotal: 21

Voice Track Requirements

MUSM 392	Concert Choir (7 semesters at 1 credit hour each)	7
MUSG 123	Class Piano I	1
MUSG 124	Class Piano II	1
MUSG 223	Class Piano III	1
MUSG 224	Class Piano IV	1
MUSC 471	Choral Conducting	2
MUSG 240	Diction for Singers I	1
MUSG 241	Diction for Singers II	1
MUSE 375	Vocal Materials and Methods*	3
MUSE 416	Vocal Pedagogy for the Music Educator*	2
		Subtotal: 20

Take four hours from the following:

MUSM 382	Jazz Vocal Ensemble	1
MUSM 391	University Chorus	1
MUSM 393	Chamber Singers	1
MUSM 394	Operaworks	1
		Subtotal: 4

Take three hours from the following:

MUSG 211	Class Woodwinds I	1
MUSG 213	Class Brasswinds I	1
MUSG 217	Class Percussion I	1
MUSG 226	Class Strings	1
		Subtotal: 3

Music Electives

Choose five hours from the following:

MUSC 472	Instrumental Conducting	2
MUSC 473	Rehearsal Techniques for Jazz Ensembles	2
MUSG 125	Score Reading	1
MUSG 183	Studio Improvisation	1
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSE 479	Marching Band Techniques	2
MUSH 481	Keyboard Literature	3
MUSH 490	School Band Literature	2
MUSH 491	Choral Literature	2
MUSM 3XX	(any ensemble)	1
MUSP 341	Private Harpsichord	1
MUSP 342	Private Organ	1
MUSP 480	Private Applied Pedagogy	1
		Subtotal: 5

Total Credit Hours: 132

BME: Woodwind and Brasswind Track

Program Requirements

Woodwind and brasswind music education students are required to enroll in and participate in all activities of the Marching Band each fall semester and in the Concert or Symphony Band each spring semester (enrollment in

a Concert Band is determined by audition). Those students who perform in the Marching Band on an instrument other than their principal applied instrument must also participate in the Concert or Symphony Band on their principal applied instrument each fall semester. In addition, woodwind and brasswind music education majors are required to take two semesters of a choral ensemble (University Chorus, Concert Choir or Chamber Singers).

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

BME Core Requirements

MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
MUST 233	Music Reading III	1
MUST 234	Music Reading IV	1
MUST 236	Music Theory III	2
MUST 237	Music Theory IV	2
MUSC 271	Basic Conducting	2
MUSE 207	Foundations of Music Education	3
MUSE 215	Microcomputers and Music	3
MUSE 325	Materials and Methods for Elementary Grades*	3
MUSH 267	World Cultures Through the Humanities	3
MUSH 361	History of Music I	3
MUSH 362	History of Music II	3
MUSM 200	Student Recital (4 semesters with passing grade of K)	0
MUSM 400	Student Recital (3 semesters with passing grade of K)	0
MUSP 200	Performance Class (4 semesters with passing grade of K)	0
MUSP 400	Performance Class (3 semesters with passing grade of K)	0
MUSP 499C	Senior Recital	3
		Subtotal: 37

Private Applied

MUSP 2XX	Private Applied (4 semesters at 2 credit hours each)	8
MUSP 4XX	Private Applied - Major Instrument (2 semesters at 2 credit hours each)	4
		Subtotal: 12

Professional Education

EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDUC 476	Content Area Literacy*	3
EDSE 416	Clinical Practice*	12
		Subtotal: 21

Woodwind/Brasswind Track Requirements

MUSM 372	Marching Band (4 semesters at 1 credit hour each)	4
MUSC 472	Instrumental Conducting	2
MUSG 211	Class Woodwinds I	1
MUSG 212	Class Woodwinds II	1
MUSG 213	Class Brasswinds I	1
MUSG 214	Class Brasswinds II	1
MUSG 217	Class Percussion I	1
MUSG 226	Class Strings	1
MUSG 239	Class Voice	1
MUSG 123	Class Piano I	1
MUSG 124	Class Piano II	1
MUSG 223	Class Piano III	1
MUSG 224	Class Piano IV	1
MUSE 376	Instrumental Materials and Methods*	3
		Subtotal: 20

Take three hours from the following:

MUSM 370	Concert Band (3 semesters at 1 credit hour each)	3
	or	
MUSM 371	Symphony Band (3 semesters at 1 credit hour each)	3
		Subtotal: 3

Take two hours from the following:

MUSM 382	Jazz Vocal Ensemble	1
MUSM 391	University Chorus	1
MUSM 392	Concert Choir	1
MUSM 393	Chamber Singers	1
MUSM 394	Operaworks	1
		Subtotal: 2

Music Electives

Choose seven hours from the following:

MUSC 471	Choral Conducting	2
MUSC 473	Rehearsal Techniques for Jazz Ensembles	2
MUSG 125	Score Reading	1
MUSG 183	Studio Improvisation	1
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSE 479	Marching Band Techniques	2
MUSH 481	Keyboard Literature	3
MUSH 490	School Band Literature	2
MUSH 491	Choral Literature	2
MUSM 3XX	(any ensemble)	1
MUSP 341	Private Harpsichord	1
MUSP 342	Private Organ	1
MUSP 480	Private Applied Pedagogy	1
		Subtotal: 7

Total Credit Hours: 132

BM – Bachelor of Music

Mission Statement

The Bachelor of Music in Performance at Morehead State University provides students with performance-focused training in solo and ensemble playing/singing, analysis, and musicology as required by the national accreditation agency (NASM), within a liberal arts curriculum, educating students for success in a global environment. Graduates of this program go on to perform, teach, and promote music all over the region and world.

Program Competencies

As an accredited institutional member of the National Association of Schools of Music (NASM), Morehead State University adheres to and complies with the standards of the association. Major categories are

1. **Performance** (technical skills, understanding of repertory, ability to read music, leadership and collaboration skills, keyboard competency, growth in artistry)
2. **Aural Skills and Analysis** (understanding of musical elements, organizational patterns, forms, processes, structures, and historical, cultural, and stylistic contexts)
3. **Composition and Improvisation** (create original music, improvisation)

4. **History and Repertory** (knowledge of music history, acquaintance with repertory outside specialization)
5. **Technology** (how technology serves music field, knowledge of technological developments in specialization)
6. **Synthesis** (combining musical capabilities, value judgements, work with comprehensive repertory, understanding interrelationships and interdependencies of music enterprise)

Assessment

1. Survey of Graduates
2. Performance Recitals
3. Exit Interview
4. Senior Capstone Course

See: BM: Collaborative Piano Track (p. 70), BM: Jazz Studies Track (p. 73), BM: Keyboard Track (p. 71), BM: Orchestral Strings Track (p. 70), BM: Percussion Track (p. 71), BM: Voice (p. 72), BM: Woodwind, Brasswind Track (p. 73)

BM: Collaborative Piano Track

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

BM: Area Requirements

Core Requirements

MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
MUST 233	Music Reading III	1
MUST 234	Music Reading IV	1
MUST 236	Music Theory III	2
MUST 237	Music Theory IV	2
MUSH 171	Global Perspectives in Music	3
MUSH 361	History of Music I	3
MUSH 362	History of Music II	3
MUSC 271	Basic Conducting	2
MUSM 200	Student Recital (4 semesters with passing grade of K)	0
MUSM 400	Student Recital (4 semesters with passing grade of K)	0
MUSP 2XX	Private Applied (4 semesters at 3 credit hours each)	12
MUSP 200	Performance Class (4 semesters with passing grade of K)	0
MUSP 360	Junior Recital	3
MUSP 400	Performance Class (4 semesters with passing grade of K)	0
MUSP 4XX	Private Applied - Major Instrument (2 semesters at 3 credit hours each)	6
MUSP 499C	Senior Recital	3
		Subtotal: 49

Collaborative Piano Requirements

MUSG 183 or MUSP 334	Studio Improvisation or Private Jazz	1
MUSG 240	Diction for Singers I	1
MUSG 241	Diction for Singers II	1
MUSH 481	Keyboard Literature	3
MUSH 492	Solo Vocal Literature	2
MUSM 387	Accompanying (4 semesters at 1 credit hour each)	4
MUSM 389 or 345	Keyboard Ensemble or Keyboard Chamber Music (2 semesters at 1 credit hour each)	2
MUSM 3XX	(any ensemble - 4 semesters at 1 credit hour each)	4
MUSP 3XX	Private Applied - Secondary Instrument (4 semesters at 1 credit hour each)	4
MUSP 443	Private Piano (2 semesters at 1 credit hour each)	2
MUSG 125	Score Reading (2 semesters at 1 credit hour each)	2
MUSW 310	Music Business	2
MUSE 215	Microcomputers and Music	3
MUST 465	Form and Analysis	2
		Subtotal: 33

Choose three credit hours from the following:

MUSC 471	Choral Conducting	2
MUSC 473	Rehearsal Techniques for Jazz Ensembles	2
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSE 479	Marching Band Techniques	2
MUSG 183	Studio Improvisation	1
MUSH 490	School Band Literature	2
MUSM 3XX	(any ensemble)	1
		Subtotal: 3

Music electives — 400-level and above

Choose two credits from any 400-level or above music course from MUSC, MUSE, MUSG, MUSH, MUSM, MUSP, MUST, or MUSW.

Subtotal: 2

Total Credit Hours: 120

BM: Orchestral Strings Track

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

BM: Area Requirements

Core Requirements

MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
MUST 233	Music Reading III	1
MUST 234	Music Reading IV	1
MUST 236	Music Theory III	2
MUST 237	Music Theory IV	2
MUSH 171	Global Perspectives in Music	3
MUSH 361	History of Music I	3
MUSH 362	History of Music II	3
MUSC 271	Basic Conducting	2
MUSM 200	Student Recital (4 semesters with passing grade of K)	0

MUSM 400	Student Recital (4 semesters with passing grade of K)	0
MUSP 2XX	Private Applied (4 semesters at 3 credit hours each)	12
MUSP 200	Performance Class (4 semesters with passing grade of K)	0
MUSP 360	Junior Recital	3
MUSP 400	Performance Class (4 semesters with passing grade of K)	0
MUSP 4XX	Private Applied - Major Instrument (2 semesters at 3 credit hours each)	6
MUSP 499C	Senior Recital	3
		Subtotal: 49

Orchestral Strings Requirements

MUSC 472	Instrumental Conducting	2
MUSG 123	Class Piano I	1
MUSG 124	Class Piano II	1
MUSG 223	Class Piano III	1
MUSG 224	Class Piano IV	1
MUSG 183	Studio Improvisation	1
MUSM 3XX	(any ensemble)	12
MUSM 378	String Ensemble (4 semesters at 1 credit hour each)	4
MUSP 480	Private Applied Pedagogy	1
MUSW 310	Music Business	2
MUSE 215	Microcomputers and Music	3
MUST 465	Form and Analysis	2
		Subtotal: 31

Choose five credit hours from the following:

MUSC 471	Choral Conducting	2
MUSC 473	Rehearsal Techniques for Jazz Ensembles	2
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSE 479	Marching Band Techniques	2
MUSG 183	Studio Improvisation	1
MUSH 490	School Band Literature	2
MUSM 3XX	(any ensemble)	1
		Subtotal: 5

Music electives — 400-level or above

Choose two credit hours from any 400-level or above music course from MUSC, MUSE, MUSG, MUSH, MUSM, MUSP, MUST, or MUSW.

Subtotal: 2

Total Credit Hours: 120

BM: Keyboard Track

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

BM: Area Requirements

Core Requirements

MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
MUST 233	Music Reading III	1
MUST 234	Music Reading IV	1
MUST 236	Music Theory III	2
MUST 237	Music Theory IV	2
MUSH 171	Global Perspectives in Music	3
MUSH 361	History of Music I	3
MUSH 362	History of Music II	3
MUSC 271	Basic Conducting	2
MUSM 200	Student Recital (4 semesters with passing grade of K)	0
MUSM 400	Student Recital (4 semesters with passing grade of K)	0
MUSP 2XX	Private Applied (4 semesters at 3 credit hours each)	12
MUSP 200	Performance Class (4 semesters with passing grade of K)	0
MUSP 360	Junior Recital	3
MUSP 400	Performance Class (4 semesters with passing grade of K)	0
MUSP 4XX	Private Applied - Major Instrument (2 semesters at 3 credit hours each)	6
MUSP 499C	Senior Recital	3
		Subtotal: 49

Keyboard Requirements

MUSG 125	Score Reading (2 semesters at 1 credit hour each)	2
MUSH 481	Keyboard Literature	3
MUSE 378	Keyboard Pedagogy	2
MUSM 389 or 345	Keyboard Ensemble or Keyboard Chamber Music (4 semesters at 1 credit hour each)	4
MUSM 387	Accompanying I (2 semesters at 1 credit hour each)	2
MUSM 3XX	(any ensemble - 4 semesters at 1 credit hour each)	4
MUSP 3XX	Private Applied - Secondary Instrument (4 semesters at 1 credit hour each)	4
MUSG 183 or MUSP 334	Studio Improvisation or Private Jazz	1
MUSW 310	Music Business	2
MUSE 215	Microcomputers and Music	3
MUST 465	Form and Analysis	2
		Subtotal: 29

Choose seven credit hours from the following:

MUSC 471	Choral Conducting	2
MUSC 473	Rehearsal Techniques for Jazz Ensembles	2
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSE 479	Marching Band Techniques	2
MUSG 183	Studio Improvisation	1
MUSH 490	School Band Literature	2
MUSM 3XX	(any ensemble)	1
		Subtotal: 7

Music electives — 400-level and above

Choose two credit hours from any 400-level or above music course from MUSC, MUSE, MUSG, MUSH, MUSM, MUSP, MUST, or MUSW.

Subtotal: 2

Total Credit Hours: 120

BM: Percussion Track

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

BM: Area Requirements

Core Requirements

MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
MUST 233	Music Reading III	1
MUST 234	Music Reading IV	1
MUST 236	Music Theory III	2
MUST 237	Music Theory IV	2
MUSH 171	Global Perspectives in Music	3
MUSH 361	History of Music I	3
MUSH 362	History of Music II	3
MUSC 271	Basic Conducting	2
MUSM 200	Student Recital (4 semesters with passing grade of K)	0
MUSM 400	Student Recital (4 semesters with passing grade of K)	0
MUSP 2XX	Private Applied (4 semesters at 3 credit hours each)	12
MUSP 200	Performance Class (4 semesters with passing grade of K)	0
MUSP 360	Junior Recital	3
MUSP 400	Performance Class (4 semesters with passing grade of K)	0
MUSP 4XX	Private Applied - Major Instrument (2 semesters at 3 credit hours each)	6
MUSP 499C	Senior Recital	3
		Subtotal: 49

Percussion Requirements

MUSG 123	Class Piano I	1
MUSG 124	Class Piano II	1
MUSG 183	Studio Improvisation	1
MUSG 223	Class Piano III	1
MUSG 224	Class Piano IV	1
MUSC 472	Instrumental Conducting	2
MUSE 215	Microcomputers and Music	3
MUSE 458	Percussion Pedagogy	2
MUSM 369	Percussion Ensemble (8 semesters at 1 credit hour each)	8
MUSM 370 or 371	Concert Band or Symphony Band (4 semesters at 1 credit hour each)	4
MUSM 372	Marching Band (4 semesters at 1 credit hour each)	4
MUST 465	Form and Analysis	2
MUSW 310	Music Business	2
		Subtotal: 32

Choose four credit hours from the following:

MUSC 471	Choral Conducting	2
MUSC 473	Rehearsal Techniques for Jazz Ensembles	2
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSE 479	Marching Band Techniques	2
MUSG 183	Studio Improvisation	1
MUSH 490	School Band Literature	2
MUSM 3XX	(any ensemble)	1
		Subtotal: 4

Music Electives - 400-level and above

Choose two credit hours from any 400-level or above music course from MUSC, MUSE, MUSG, MUSH, MUSM, MUSP, MUST, or MUSW.

Subtotal: 2

Total Credit Hours: 120

BM: Voice

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

BM: Area Requirements

Core Requirements

MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
MUST 233	Music Reading III	1
MUST 234	Music Reading IV	1
MUST 236	Music Theory III	2
MUST 237	Music Theory IV	2
MUSH 171	Global Perspectives in Music	3
MUSH 361	History of Music I	3
MUSH 362	History of Music II	3
MUSC 271	Basic Conducting	2
MUSM 200	Student Recital (4 semesters with passing grade of K)	0
MUSM 400	Student Recital (4 semesters with passing grade of K)	0
MUSP 2XX	Private Applied (4 semesters at 3 credit hours each)	12
MUSP 200	Performance Class (4 semesters with passing grade of K)	0
MUSP 360	Junior Recital	3
MUSP 400	Performance Class (4 semesters with passing grade of K)	0
MUSP 4XX	Private Applied - Major Instrument (2 semesters at 3 credit hours each)	6
MUSP 499C	Senior Recital	3
		Subtotal: 49

Voice Requirements

MUSG 123	Class Piano I	1
MUSG 124	Class Piano II	1
MUSG 223	Class Piano III	1
MUSG 224	Class Piano IV	1
MUSG 240	Diction for Singers I	1
MUSG 241	Diction for Singers II	1
MUSP 480	Private Applied Pedagogy	1
MUSM 392	Concert Choir (8 semesters at 1 credit hour each)	8
FRN 101	Beginning French I	3
FRN 102	Beginning French II	3
GER 101	Beginning German I	3
GER 102	Beginning German II	3
MUSE 215	Microcomputers and Music	3
MUST 465	Form and Analysis	2
		Subtotal: 32

Choose four credit hours from the following:

(4 semesters at 1 credit hour each)

MUSM 382	Jazz Vocal Ensemble	1
MUSM 393	Chamber Singers	1
MUSM 394	Operaworks	1
		Subtotal: 4

Choose two credit hours from the following:

MUSC 471	Choral Conducting	2
MUSC 473	Rehearsal Techniques for Jazz Ensembles	2
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSE 479	Marching Band Techniques	2
MUSG 183	Studio Improvisation	1
MUSH 490	School Band Literature	2
MUSM 3XX	(any ensemble)	1
		Subtotal: 2

Total Credit Hours: 120

BM: Woodwind, Brasswind Track

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

BM: Area Requirements

Core Requirements

MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
MUST 233	Music Reading III	1
MUST 234	Music Reading IV	1
MUST 236	Music Theory III	2
MUST 237	Music Theory IV	2
MUSH 171	Global Perspectives in Music	3
MUSH 361	History of Music I	3
MUSH 362	History of Music II	3
MUSC 271	Basic Conducting	2
MUSM 200	Student Recital (4 semesters with passing grade of K)	0
MUSM 400	Student Recital (4 semesters with passing grade of K)	0
MUSP 2XX	Private Applied (4 semesters at 3 credit hours each)	12
MUSP 200	Performance Class (4 semesters with passing grade of K)	0
MUSP 360	Junior Recital	3
MUSP 400	Performance Class (4 semesters with passing grade of K)	0
MUSP 4XX	Private Applied - Major Instrument (2 semesters at 3 credit hours each)	6
MUSP 499C	Senior Recital	3
		Subtotal: 49

Woodwind, Brasswind Requirements

MUSG 123	Class Piano I	1
MUSG 124	Class Piano II	1
MUSG 183	Studio Improvisation	1
MUSG 223	Class Piano III	1
MUSG 224	Class Piano IV	1
MUSC 472	Instrumental Conducting	2
MUSP 480	Private Applied Pedagogy	1
MUSM 370 or 371	Concert Band or Symphony Band (8 semesters at 1 credit hour each)	8
MUSM 3XX	(any ensemble - 4 semesters at 1 credit hour each)	4
MUSW 310	Music Business	2
MUSE 215	Microcomputers and Music	3
MUST 465	Form and Analysis	2
		Subtotal: 27

Choose four credit hours from the following:

(4 semesters at 1 credit hour each)

MUSM 335	Clarinet Choir	1
MUSM 336	Woodwind Ensemble	1
MUSM 361	Trumpet Choir	1
MUSM 362	Trombone Choir	1
MUSM 363	Tuba and Euphonium Ensemble	1
MUSM 368	Brasswind Ensemble	1
		Subtotal: 4

Choose five credit hours from the following:

MUSC 471	Choral Conducting	2
MUSC 473	Rehearsal Techniques for Jazz Ensembles	2
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSE 479	Marching Band Techniques	2
MUSG 183	Studio Improvisation	1
MUSH 490	School Band Literature	2
MUSM 3XX	(any ensemble)	1
		Subtotal: 5

Music electives - 400-level and above

Choose two credit hours from any 400-level or above music course from MUSC, MUSE, MUSG, MUSH, MUSM, MUSP, MUST, or MUSW.

Subtotal: 2

Total Credit Hours: 120

BM: Jazz Studies Track

Mission Statement

The Bachelor of Music in Jazz Studies provides students with training in jazz performance, analysis, history, and theory. The degree educates students for success in a global environment and fosters innovation, collaboration and creative thinking.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

BM: Area Requirements

Core Requirements

MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
MUST 233	Music Reading III	1
MUST 234	Music Reading IV	1
MUST 236	Music Theory III	2
MUST 237	Music Theory IV	2
MUSH 171	Global Perspectives in Music	3

MUSH 361	History of Music I	3
MUSH 362	History of Music II	3
MUSC 271	Basic Conducting	2
MUSM 200	Student Recital (4 semesters with passing grade of K)	0
MUSM 400	Student Recital (4 semesters with passing grade of K)	0
MUSP 2XX	Private Applied (4 semesters at 3 credit hours each)	12
MUSP 200	Performance Class (4 semesters with passing grade of K)	0
MUSP 360	Junior Recital	3
MUSP 400	Performance Class (4 semesters with passing grade of K)	0
MUSP 4XX	Private Applied - Major Instrument (2 semesters at 3 credit hours each)	6
MUSP 499C	Senior Recital	3
		Subtotal: 49

Jazz Studies Requirements

MUST 240	Jazz Theory	2
MUSG 245	Jazz Keyboard I	1
MUSG 246	Jazz Keyboard II	1
MUSG 183	Studio Improvisation (2 semesters at 1 credit hour each)	2
MUSG 383	Studio Improvisation (2 semesters at 1 credit hour each)	2
MUSH 365	Jazz History and Literature	3
MUSW 325	Music Recording and Sound Reinforcement	3
MUSC 473 or 471	Rehearsal Techniques for Jazz Ensemble or Choral Conducting	2
MUST 433	Arranging for Jazz Ensembles I	2
MUST 434	Arranging for Jazz Ensembles II	2
MUSM 337	Jazz Combo (4 semesters at 1 credit hour each)	4
MUSW 310	Music Business	2
		Subtotal: 26

Choose two credit hours from the following:

MUSC 471	Choral Conducting	2
MUSC 472	Instrumental Conducting	2
MUSE 416	Vocal Pedagogy for the Music Educator*	2
MUSG 183	Studio Improvisation	1
MUSH 490	School Band Literature	2
MUSM 3XX	Choose from all ensembles	2
		Subtotal: 2

Class Piano Electives

Choose two credit hours from the following:

MUSG 123	Class Piano I	1
MUSG 124	Class Piano II	1
MUSG 223	Class Piano III	1
MUSG 224	Class Piano IV	1
MUSG 345	Jazz Keyboard III	1
MUSG 346	Jazz Keyboard IV	1
		Subtotal: 2

Note: Jazz Pianists must take 345 and 346.

Jazz Ensemble

(8 semesters at 1 credit hour each)

MUSM 380	Jazz Ensemble I	1
MUSM 381	Jazz Ensemble II	1
MUSM 382	Jazz Vocal Ensemble	1
MUSM 384	Guitar Ensemble	1
		Subtotal: 8

Total Credit Hours: 120

Music Major – Bachelor of Arts

Mission Statement

The Bachelor of Arts degree in Music at Morehead State University provides students with broad training in performance, analysis, and musicology in music as required by the national accreditation agency (NASM), within the liberal arts curriculum, educating students for success in a global environment. Graduates of this program go on to perform, teach, and promote music all over the region and world.

Admission Requirements

All students are required to pass a successful performance audition for admission into the BA in Music program.

Program Competencies

As an accredited institutional member of the National Association of Schools of Music (NASM), Morehead State University adheres to and complies with the standards of the association. Major categories are

1. **Performance** (technical skills, understanding of repertory, ability to read music, leadership and collaboration skills, keyboard competency, growth in artistry)
2. **Aural Skills and Analysis** (understanding of musical elements, organizational patterns, forms, processes, structures, and historical, cultural, and stylistic contexts)
3. **Composition and Improvisation** (create original music, improvisation)
4. **History and Repertory** (knowledge of music history, acquaintance with repertory outside specialization)
5. **Technology** (how technology serves music field, knowledge of technological developments in specialization)
6. **Synthesis** (combining musical capabilities, value judgements, work with comprehensive repertory, understanding interrelationships and interdependencies of music enterprise)

Assessment

In addition to course grades, competencies will be measured by:

1. Successful jury examinations required each semester and evaluated by the music faculty in each student's specialization area.
2. Upper Division Assessment required prior to enrolling for junior-level applied lessons evaluated by the music faculty in each student's specialization area.
3. Recital hearing examinations required prior to each recital performance and evaluated by the music faculty in each student's specialization area.
4. Capstone course consisting of musical performance combined with a research project required of all Bachelor of Arts in Music students during the capstone course in the senior year and evaluated by the music faculty in each student's specialization area.
5. ETS Major Field Exam required prior to graduation with results distributed to music faculty each year.

Program Requirements

The Bachelor of Arts degree in Music provides for the study of music within a liberal arts curriculum. The program is suitable for preparing for careers in music other than performance and certified teaching in the schools.

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements

that are also general education requirements will count in both places (as applicable).

Major Core Requirements

MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
MUSE 215	Microcomputers and Music	3
MUSH 171	Global Perspectives in Music	3
MUSW 310	Music Business	2
MUSM 200	Student Recital	0
MUSP 2XX	Private Applied (4 semesters at 2 credit hours each)	8
MUSP 200	Performance Class	0
MUSW 499C	Senior Project	3
		Subtotal: 27

MUSM 200 (four semesters required, 0 credit hours each)

MUSP 2XX (four semesters required, 2 credit hours each)

MUSP 200 (four semesters required, 0 credit hours each)

The senior project course is an option for music BA students only. This course involves a performance component as well as a component involving the student's academic interests. This project is required to have writing and presentation activities. The performance and academic components can be related. The project is to be developed by the student and his/her private applied teacher. Approval required from appropriate area performance faculty.

Tracks - Choose one

General Music Track

MUSG 123	Class Piano I	1
MUSG 124	Class Piano II	1
MUST 233	Music Reading III	1
MUST 234	Music Reading IV	1
MUST 236	Music Theory III	2
MUST 237	Music Theory IV	2
MUSH 361	History of Music I	3
MUSH 362	History of Music II	3
MUSM 400	Student Recital	0
MUSP 4XX	Private Applied - Major Instrument	6
MUSP 400	Performance Class	0
MUSM 3XX	Ensemble	4
		Subtotal: 24

MUSM 400 (four semesters required, 0 credit hours each)
MUSP 4XX (three semesters required, 2 credit hours each)
MUSP 400 (four semesters required, 0 credit hours each)
MUSM 3XX (four semesters required, 1 credit hour each)

Commercial Music Track

MUSG 245	Jazz Keyboard I	1
MUSG 246	Jazz Keyboard II	1
MUSG 183	Studio Improvisation	1
MUST 240	Jazz Theory	2
MUST 433	Arranging for Jazz Ensembles I	2
MUSW 325	Music Recording and Sound Reinforcement	3
MUSM 400	Student Recital	0
MUSP 4XX	Private Applied - Major Instrument	6
MUSP 400	Performance Class	0
MUSM 3XX	Ensemble	4
		Subtotal: 20

MUSM 400 (four semesters required, 0 credit hours each)
MUSP 4XX (three semesters required, 2 credit hours each)
MUSP 400 (four semesters required, 0 credit hours each)
MUSM 3XX (four semesters required, 1 credit hour each)

Choose three hours from the following:

MUSH 338	Traditional Music History I	3
MUSH 361	History of Music I	3
MUSH 365	Jazz History and Literature	3
		Subtotal: 3

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Chosen from 300+ level

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Traditional Music

Daxson Lewis, Director, Kentucky Center for Traditional Music
107 Kentucky Center for Traditional Music
Morehead, KY 40351
606-783-9001
kctm@moreheadstate.edu

Traditional Music Studies Major – Bachelor of Arts

The Bachelor of Arts in Traditional Music Studies provides for the study of traditional music within a liberal arts curriculum. The program is suitable for preparing students for careers in traditional music.

As it relates to the Kentucky Center for Traditional Music at Morehead State University, "traditional" music includes bluegrass, old time, country, western swing, blues, Celtic, ballad singing, and many other forms. The music with which we are most involved stems from, or is influenced by, the music that is identified with our southern Appalachian mountain region.

Special Admission Requirements

Entrance Auditions and Placement Assessment

All new and transfer students planning to major or minor in music must audition before the Kentucky Center for Traditional Music faculty on their principal performing instrument or voice prior to enrollment. The audition process is used to determine the student's readiness for entry into a music degree program. A scholarship audition may serve as a student's admission audition.

Transfer Student Admission

The music major entering the Department of Music, Theatre and Dance by transfer must submit an official transcript of all previous college work. The applicant should be prepared to validate achievements in the area of applied music, music theory, ear training and the history and literature of traditional music. Resolution of any deficiency must be initiated during the first registration period.

Goals

To provide students:

1. The resources and opportunity to learn about traditional music forms and culture from both a historical and contemporary perspective using methods which encourage quality learning through discovery and inspiration.
2. Extensive performance experience.
3. The opportunity to interact with musical artists and professionals in the traditional music industry.
4. Mentoring and preparation to become well-rounded, creative, productive traditional music artists.

5. Materials and resources for research and study through the unique collections that are housed in the Traditional Music Archives, which is part of the Kentucky Center for Traditional Music.

And:

6. To simultaneously preserve and develop our art form.
7. To engage and educate the public, positively representing Kentucky's rich cultural heritage, the Appalachian region and Morehead State University through performance and interaction with the community in the MSU service region and beyond.

Program Competencies

Competencies required for successful completion of this program include:

1. The ability to hear, identify and work conceptually with the elements of music such as rhythm, melody, harmony, structure, timbre and texture;
2. An understanding of and the ability to read and realize musical notation as appropriate to traditional music;
3. An understanding of composition processes, aesthetic properties of style, and the ways these shape and are shaped by artistic and cultural forces;
4. An acquaintance with a wide selection of musical literature, the principal eras, genres and cultural sources;
5. The ability to develop and defend musical judgments;
6. Ability in performing areas at levels consistent with the goals and objectives of the Bachelor of Arts in Traditional Music Studies;
7. Understanding of procedures for realizing a variety of musical styles; and
8. Knowledge and/or skills in one or more areas of music beyond basic musicianship appropriate to the individual's needs and interests, and consistent with the purposes of the Bachelor of Arts in Traditional Music Studies.

Assessment

1. Capstone
2. Survey of graduates
3. Performance recitals
4. Exit interview

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

History

MUSH 171	Global Perspectives in Music	3
MUSH 338	Traditional Music History I	3
MUSH 339	Traditional Music History II	3
MUSH 340	Traditional Music History III	3
		Subtotal: 12

Private Applied

MUSP 238 -Take eight hours

MUSP 238A	Private Bluegrass Banjo	1-4
MUSP 238B	Private Old Time Banjo	1-4
MUSP 238C	Private Mandolin	1-4
MUSP 238D	Private Traditional Guitar	1-4
MUSP 238E	Private Country Electric Guitar	1-4
MUSP 238F	Private Upright Traditional Bass	1-4
MUSP 238G	Private Dobro	1-4
MUSP 238H	Private Mountain Dulcimer	1-4
MUSP 238I	Private Bluegrass and Country Fiddle	1-4
MUSP 238J	Private Old Time Fiddle	1-4
MUSP 238K	Private Celtic Fiddle	1-4
MUSP 238V	Private Traditional Voice	1-4
		Subtotal: 8

Note: MUSP 238: (taken concurrent with MUSP 200)

MUSP 438 - Take six hours

MUSP 438A	Private Bluegrass Banjo	1-4
MUSP 438B	Private Old Time Banjo	1-4
MUSP 438C	Private Mandolin	1-4
MUSP 438D	Private Traditional Guitar	1-4
MUSP 438E	Private Country Electric Guitar	1-4
MUSP 438F	Private Upright Traditional Bass	1-4
MUSP 438G	Private Dobro	1-4
MUSP 438H	Private Mountain Dulcimer	1-4
MUSP 438I	Private Bluegrass and Country Fiddle	1-4
MUSP 438J	Private Old Time Fiddle	1-4
MUSP 438K	Private Celtic Fiddle	1-4
MUSP 438V	Private Traditional Voice	1-4
		Subtotal: 6

Note: MUSP 438: (taken concurrently with MUSP 400)

Ensembles - Take eight hours

MUSM 383	Traditional Music Ensemble	1
MUSM 200	Student Recital	0
MUSM 400	Student Recital	0
		Subtotal: 8

MUSM 383: (student must take Private Applied concurrent with Ensemble)

MUSM 200, MUSM 400: (four semesters each)

Theory

MUST 103	Practical Theory for Traditional Music	2
MUST 120	Aural Skills	2
MUST 355	Traditional Vocal Harmony	2
MUST 445	Chart Writing and Application	3
		Subtotal: 9

Music Business

MUSW 310	Music Business	2
		Subtotal: 2

Recording and Production

MUSW 325	Music Recording and Sound Reinforcement	3
		Subtotal: 3

Capstone

MUSW 499C	Senior Project	3
		Subtotal: 3

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Traditional Music Studies Minor

The minor in traditional music studies provides for the study of traditional music as related to the creative cultural interaction in Appalachia that has produced a wealth of distinctive styles of music. As it relates to The

Kentucky Center for Traditional Music at Morehead State University, "traditional" music includes bluegrass, old time, country, ballad singing, blues, Celtic, western swing and many other related forms. The music with which we are most involved stems from or is influenced by the music that is identified with our southern Appalachian mountain regions.

Traditional Music Studies Minor Requirements

Students must audition to be admitted to this minor. Traditional Music Theory classes (MUST 103, MUST 120, MUST 355 and MUST 445) must be taken in sequence.

Private Applied

Choose eight hours from the following:

MUSP 238(A-V)	Private Applied - Traditional Instruments	8
		Subtotal: 8

Ensembles

Choose four hours from the following:

MUSM 183	Introduction Traditional Music Ensemble	1
MUSM 383	Traditional Music Ensemble	1
		Subtotal: 4

Electives

Choose nine hours from the following:

MUST 103	Practical Theory for Traditional Music	2
MUST 120	Aural Skills	2
MUST 355	Traditional Vocal Harmony	2
MUST 445	Chart Writing and Application	3
MUSH 338	Traditional Music History I	3
MUSH 339	Traditional Music History II	3
MUSH 340	Traditional Music History III	3
		Subtotal: 9

Total Credit Hours: 21

Music Minor

Music Minor Program Requirements

Core Requirements

MUSH 171	Global Perspectives in Music	3
MUST 131	Music Theory I	3
MUST 132	Music Theory II	3
MUST 133	Music Reading I	1
MUST 135	Music Reading II	1
		Subtotal: 11

Piano

Choose two hours from the following:

MUSG 123	Class Piano I	1
MUSG 124	Class Piano II	1
MUSG 223	Class Piano III	1
MUSG 224	Class Piano IV	1
		Subtotal: 2

Ensembles

Choose four hours from the following (Bands, Choirs, Trad/Guitar, Orchestras, Piano, Jazz):

MUSM	(all ensembles)	4
MUSM 200	Student Recital	0
		Subtotal: 4

Private Applied

Choose eight hours from the following:

MUSP 2XX	Private Applied (4 semesters at 2 credit hours each)	8
MUSP 200	Performance Class	0
		Subtotal: 8

NOTE:

1. MUSM 200, MUSP 200: (four semesters with a passing grade of "K" required)

Total Credit Hours: 25

Theatre and Dance

Faculty

O. Biggs Fleck, M. Hayes, D. Watkins

The distinguished Music, Theatre, and Dance Department offers substantial educational programs and opportunities both on and off stage in theatrical productions. Our faculty and staff are individually and collectively committed to help students thrive and succeed. As a program accredited by the National Association of Schools of Theatre, we offer degrees in theatre and theatre education, and a minor in theatre. Our students benefit from a host of options every year with four Mainstage Productions and additional Second Stage Productions. Our students participate as actors, technicians, designers and directors. The faculty at Morehead State is committed to providing as many hands-on experiences as possible for you so that when you graduate you will have a portfolio of realized work. In addition to the productions mentioned above, MSU Theatre also produces The Little Company, a troupe that performs for elementary and high schools and conducts workshops in drama. The MSU Theatre Program is active in the Southeastern Theatre Conference and the Kennedy Center American College Theatre Festival.

Theatre Fees

THEA 210 Technical Production: $60

THEA 225 Introduction to Theatre Production Design: $60

THEA 321 Stage Lighting: $60

THEA 322 Scene Design: $60

THEA 499C Senior Seminar Theatre: $60

Theatre Area with Teacher Certification (P-12) – Bachelor of Arts

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

TEP Admission Requirements

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication

d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

Students will demonstrate:

1. A general familiarity with all aspects of theatre (and/or dance).
2. A proficiency in at least two areas of theatre (and/or dance) production such as acting, directing, set design and construction, costume design and construction, lighting, properties, makeup, publicity, sound design, and stage movement.
3. Familiarity with significant periods and styles of dramatic literature.
4. Basic knowledge of the chronological history of theatre (and/or dance).

Assessment

1. Capstone Course

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Theatre Teaching Core Requirements

ART 109	Digital Foundations	3
THEA 100	Fundamentals of the Theatre	3
THEA 101	Voice and Articulation	3
THEA 200	Introduction to Dramatic Literature	3
THEA 210	Technical Production	3
THEA 211	Costume Construction I	3
THEA 225	Introduction to Theatre Production Design	3
THEA 284	Acting Techniques	3
THEA 370	Children's Theatre	3
THEA 375	Creative Dramatics	3
THEA 380	Play Directing	3
THEA 475	Theatre Education Secondary Methods	3
THEA 499C	Senior Seminar Theatre	3
		Subtotal: 39

Electives

Choose one of the following:

THEA 354	Theatre History	3
THEA 355	Theatre History II	3
		Subtotal: 3

Choose three of the following (at three different levels):

THEA 177	Theatre Production and Performance Practicum	1
THEA 277	Theatre Production and Performance Practicum	1
THEA 377	Theatre Production and Performance Practicum	1
THEA 477	Theatre Production and Performance Practicum	1
		Subtotal: 6

Choose two of the following:

THEA 321	Stage Lighting	3
THEA 322	Scene Design	3
THEA 326	Costume Design	3
		Subtotal: 6

Professional Education

EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDSP 230	Education of Exceptional Children	3
EDSE 416	Clinical Practice*	12
EDSE 483	Classroom Organization and Management for Secondary Teachers*	3
EDUC 476	Content Area Literacy*	3
		Subtotal: 27

EDSE 416: Application for clinical practice submitted one semester in advance to Teacher Education Services.

Choose one of the following:

EDF 311	Learning Theories, Assessment and Diversity*	3
EDEE 305	Learning Theories and Practices in Early Elementary	3
		Subtotal: 3

Choose one of the following:

EDSE 312	Educational Methods and Technology*	3
EDEL 302	Integrating Technology into the Classroom	3
		Subtotal: 3

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Theatre Major – Bachelor of Arts

Program Competencies

Students will demonstrate:

1. A general familiarity with all aspects of theatre (and/or dance).
2. A proficiency in at least two areas of theatre (and/or dance) production such as acting, directing, set design and construction,

costume design and construction, lighting, properties, makeup, publicity, sound design, and stage movement.

3. Familiarity with significant periods and styles of dramatic literature.
4. Basic knowledge of the chronological history of theatre (and/or dance).

Assessment

1. Capstone Course

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

Theatre Requirements

ART 109	Digital Foundations	3
THEA 100	Fundamentals of the Theatre	3
THEA 101	Voice and Articulation	3
THEA 200	Introduction to Dramatic Literature	3
THEA 210	Technical Production	3
THEA 211	Costume Construction I	3
THEA 225	Introduction to Theatre Production Design	3
THEA 284	Acting Techniques	3
THEA 380	Play Directing	3
THEA 354	Theatre History	3
THEA 355	Theatre History II	3
THEA 499C	Senior Seminar Theatre	3

Subtotal: 36

Practicum - Choose three hours from the following:

THEA 177	Theatre Production and Performance Practicum	1
THEA 277	Theatre Production and Performance Practicum	1
THEA 377	Theatre Production and Performance Practicum	1
THEA 477	Theatre Production and Performance Practicum	1

Subtotal: 3

THEA 177-THEA 477: (at least one hour at three different levels, one credit hour each)

Theatre Elective Requirements

Choose two of the following (six hours):

THEA 321	Stage Lighting	3
THEA 322	Scene Design	3
THEA 326	Costume Design	3

Subtotal: 6

Choose two of the following (six hours):

THEA 105	Modern Dance Technique	3
THEA 205	Intermediate Modern Dance	3
THEA 207	Dance Improvisation	3
THEA 208	Beginning Ballet	3
THEA 305	Advanced Modern Dance Technique	3
THEA 308	Intermediate Ballet	3
THEA 309	Tap Dancing	3
THEA 310	Stage Movement	3
THEA 311	Theatre Seminar I	3
THEA 312	Theatre Seminar II	3
THEA 313	Theatre Seminar III	3
THEA 314	Acting for the Camera	3
THEA 315	Stage Makeup	3
THEA 316	Stage Properties	3
THEA 317	Scene Painting	3
THEA 318	Hip-Hop and Urban Dance	3
THEA 319	Jazz Dance	3
THEA 321	Stage Lighting	3
THEA 322	Scene Design	3
THEA 325	Costume History	3
THEA 326	Costume Design	3
THEA 328	Creative Sewing for the Theatre II	3
THEA 340	Auditioning	3
THEA 375	Creative Dramatics	3
THEA 408	Advanced Ballet	3
THEA 412	Playwriting	3
THEA 413	Advanced Play Directing	3
THEA 430	Summer Theatre III	4
THEA 452	Early Dramatic Literature	3
THEA 453	Modern Dramatic Literature	3
THEA 455	Dramatic Criticism	3
THEA 462	Advanced Acting	3
THEA 463	Advanced Costuming	3
THEA 464	Advanced Scene Design	3
THEA 465	Advanced Stage Lighting	3
THEA 370	Children's Theatre	3
THEA 484	Styles of Acting	3

Subtotal: 6

Minor

All majors must complete a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Additional Requirements:

Annual progress meeting with the faculty

Total Credit Hours: 120

Theatre Minor

Theatre Minor Requirements

Core Requirements

THEA 100	Fundamentals of the Theatre	3
THEA 200	Introduction to Dramatic Literature	3
THEA 210	Technical Production	3
THEA 211	Costume Construction I	3
THEA 225	Introduction to Theatre Production Design	3
THEA 284	Acting Techniques	3
THEA 380	Play Directing	3

Subtotal: 21

Electives

Choose three hours (one course) from the following:

THEA 321	Stage Lighting	3
THEA 322	Scene Design	3
THEA 326	Costume Design	3

Subtotal: 3

Additional Requirements

Annual progress meeting with the faculty.

Total Credit Hours: 24

Dance Minor

Dance courses and the dance ensemble are open to all university students.

Dance Minor Requirements

Core Requirements

THEA 105	Modern Dance Technique	3
THEA 107	Introduction to Dance Performance Art	3
THEA 208	Beginning Ballet	3
THEA 324	Dance History	3
		Subtotal: 12

Electives

Basic Dance Technique Elective

Choose three hours (one course) from the following:

THEA 205	Intermediate Modern Dance	3
THEA 305	Advanced Modern Dance Technique	3
THEA 308	Intermediate Ballet	3
THEA 408	Advanced Ballet	3
		Subtotal: 3

Performance Process Oriented

Choose three hours (one course) from the following:

THEA 207	Dance Improvisation	3
THEA 307	Dance Composition	3
		Subtotal: 3

Alternative Elective

Choose three hours (one course) from the following:

THEA 309	Tap Dancing	3
THEA 311	Theatre Seminar I	3
THEA 312	Theatre Seminar II	3
THEA 318	Hip-Hop and Urban Dance	3
THEA 319	Jazz Dance	3
		Subtotal: 3

Total Credit Hours: 21

Sociology Social Work and Criminology Department

Constance Hardesty, Chair
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606-783-2202
sswc@moreheadstate.edu

Faculty

C. Atkins, B. Barton, A. Blankenship, E. Breschel, R. Bylund (Faculty Emeritus), R. Davison, L. Geurin, R. Hall, C. Hardesty, T. Hare, L. Hesterberg (Faculty Emeritus), M. Himes, R. Katz (Faculty Emeritus), A. London, S. Nash, E. Perkins, D. Robinson, L. Shannon, A. Spencer, J. Stafford (Faculty Emeritus), P. Susan, S. Tallichet, R. Weaver, M. Williams

Social Work

BSW – Bachelor of Social Work

The Bachelor of Social Work (BSW) Program is fully accredited by the Council on Social Work Education and prepares students as generalist practitioners for professional social work practice with individuals, families, groups, organizations and communities.

Program Competencies

Students will:

1. Demonstrate ethical and professional behavior.
2. Engage diversity and difference in practice.
3. Advance human rights and social, economic and environmental justice.
4. Engage in practice-informed research and research-informed practice.
5. Engage in policy practice.
6. Engage with individuals, families, groups, organizations and communities.
7. Assess individuals, families, groups, organizations and communities.
8. Intervene with individuals, families, groups, organizations and communities.
9. Evaluate practice with individuals, families, groups, organizations and communities.

Admission Procedures and Requirements

Students seeking a BSW degree must apply to the Social Work Program the semester before the first set of required core courses (SWK 320, SWK 324, and SWK 325). Students on the Morehead and Prestonsburg campuses will apply during the spring semester and begin the program in the fall semester. Students on the Ashland and Mt. Sterling campuses will apply in the fall semester and begin the program in the spring semester. Admission is limited to 120 students per academic year. The application priority deadline is three weeks prior to the first week of Advance Registration for classes. The Social Work Admissions Committee will evaluate all applicants and determine students that are accepted into each campus cohort.

Applicants must complete the following materials and submit them to their Academic Advisor:

- Completed Social Work Program Student Application
- Completed Social Work Admission Statement of Understanding
- A Personal Statement as outlined in the application packet
- Printed results of the Interest Profiler
- Copy of their unofficial transcript and/or program evaluation

Admissions Requirements

Student has:

1. Been unconditionally admitted to Morehead State University.
2. Declared Social Work as major (Area).
3. Completed 60 hours of credit towards degree including pending hours.
4. Completed all University General Education requirements.
5. Completed or is currently enrolled in SWK 210 and SWK 230.
6. Earned a "C" or better in SWK 210 and SWK 230.
7. Achieved an overall and Social Work GPA of 2.5.

Academic Standards and Progression

Student will:

1. Complete each course in the Social Work Area Requirements with a minimum grade of a "C".
2. Maintain 2.0 overall GPA.
3. Comply with University Administrative Policies and Procedures.
4. Adhere to professional behaviors addressed in the National Association of Social Workers (NASW) Code of Ethics.
5. Demonstrate personal integrity or emotional stability requisite for professional practice and/or to fulfill classroom and program expectations.
6. Demonstrate the effective interpersonal skills necessary to form professional relationships.
7. Meet requirements for the Kentucky Board of Social Work Licensing.
8. Be dismissed from the BSW Program for any of the following situations after admission to the program
    a. Achievement of less than a "C" twice in the same Social Work Area course.
    b. Achievement of less than a "C" in any two Social Work Area Requirements.
    c. Violation of University Administrative Policies and Procedures.
    d. Violation of the NASW Code of Ethics.

e. Failure to demonstrate personal integrity or emotional stability requisite for professional practice and/or to fulfill classroom and program expectations due to mental health or chemical dependency issues required for professional practice.
f. Failure to demonstrate the effective interpersonal skills necessary to form professional helping relationships (e.g. inability to reflect a non-judgmental attitude; using racist and/or sexist language; demonstrating unprofessional behavior).
g. Has been found guilty of criminal misconduct that affects the student's ability to be licensed as a social worker.

Assessment

1. Survey of graduates
2. Employer Survey
3. Final Supervisor Evaluation in Senior Practicum

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Social Work Area Requirements

SWK 210	Orientation to Social Work	4
SWK 230	Social Welfare History & Ethics	3
SWK 320	Human Behavior in the Social Environment - Conception to Young Adulthood	3
SWK 321	Human Behavior in the Social Environment - Middle Adulthood to Death	3
SWK 324	Social Work Research Methods	3
SWK 325	Social Work Generalist Perspective	3
SWK 326	Generalist Practice Lab	3
SWK 345	Law and Social Work	3
SWK 424	Social Work Micro Practice	3
SWK 426	Social Work Mezzo Skills	3
SWK 430	Social Policy and Planning	3
SWK 451	Quantitative Data Analysis	3
SWK 497	Practicum in Social Work	8
SWK 498	Social Work Macro Practice	3
SWK 499C	Senior Seminar	3
SOC 374	Race and Ethnicity	3
		Subtotal: 54

Choose one of the following:

SWK 394	Introduction to Substance Use Disorders	3
SWK 470	Introduction to Substance Use Disorder Counseling	3
		Subtotal: 3

Social Work Electives

Choose three hours from SWK

SWK Elective	(chosen by student)	3
		Subtotal: 3

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Social Work Minor

The minor in social work provides majors in related fields an understanding of the social work profession, an introduction to basic practice skills and an opportunity to gain actual experience in a field setting. Students must earn a "C" or higher in all of the courses listed in order to earn a minor in social work.

Social Work Minor Requirements

Required:

SWK 210	Orientation to Social Work	4
SWK 230	Social Welfare History & Ethics	3
SWK 310	Field Experience in Social Work	3
SWK 333	Beginning Helping Skills for Human Service Professionals	3
	or	
SWK 360	Crisis Intervention	3
		Subtotal: 13

Electives

SWK	Electives	9
		Subtotal: 9

Total Credit Hours: 22

Substance Use Disorders Minor

The substance use disorders minor is designed to prepare students for work in the field of substance use disorder treatment. Students who complete this minor will be knowledgeable in screening, assessment, treatment planning, and treatment modalities, as well as the bio-psychosocial aspects of drug use and the impact on individuals, families, and communities. The minor is open to students from any major.

Students who are interested in becoming credentialed and/or licensed alcohol and drug counselors in Kentucky, or elsewhere, must meet state requirements. Those requirements might differ from the course content in this minor. Completing the minor in substance use disorders does not imply license to practice. Students are encouraged to contact the state licensing board if they are interested in becoming a certified alcohol and drug counselor.

Students must earn a "C" or higher in all of the courses listed in order to earn the minor in Substance Use Disorders.

Admission Requirements

Minimum 2.5 GPA

Substance Use Disorders Minor Requirements

Core Requirements

SWK 470	Introduction to Substance Use Disorder Counseling	3
SWK 471	Screening, Assessment, and Treatment of Substance Use Disorders	3
SWK 472	Approaches to Chemical Dependency Treatment I	3
SWK 473	Contemporary Treatment Approaches for Substance Use Disorders	3
SWK 474	Practicum in Substance Use Disorder Treatment	3
		Subtotal: 15

Electives

Choose six hours from the list of approved substance use disorders electives below:

Health:

HLTH 418	Use and Abuse of Drugs	3

Nursing:		
NURS 202	Medical Terminology	2
NURS 302	Health Maintenance Through Life	3
NURS 303	Women's Health Care	3
NURS 304	Men's Health Issues	3
Psychology:		
PSY 154	Introduction to Psychology	3
PSY 156	Life Span Developmental Psychology	3
PSY 157	Psychology of Adjustment	3
PSY 390	Psychology of Personality	3
PSY 450	Abnormal Psychology	3
PSY 465	Drugs and Behavior	3
PSY 469	Counseling Psychology	3
PSY 471	Addiction Therapies	3
Sociology:		
SOC 306	Juvenile Delinquency	3
SOC 350	Sex and Gender	3
SOC 354	Individual and Society	3
SOC 363	Sex Industry Perspectives	3
SOC 416	Family Dynamics	3
SOC 459	Social Change in Appalachia	3
Social Work:		
SWK 300	Criminogenic Family	3
SWK 301	Family Violence: An International Perspective	3
SWK 306	Juvenile Delinquency	3
SWK 315	Child Welfare Services	3
SWK 330	Health Structures and Behavior	3
SWK 333	Beginning Helping Skills for Human Service Professionals	3
SWK 334	Women and Partner Violence	3
SWK 335	Families in Modern Society	3
SWK 340/GST 340	Introduction to Mental Health and Mental Illness	3
SWK 358	Child Abuse and Neglect	3
SWK 360	Crisis Intervention	3
SWK 380	Social Work Practice in Health Care	3
SWK 381	Race, Class, Gender and Crime	3
SWK 416	Working with Offenders	3
SWK 420	Social Work Administration & Management	3
SWK 435	Group Dynamics	3
SWK 441	Issues in Aging	3
SWK 445	Death and Dying	3
SWK 458	Social Work Interview Methods in Child Maltreatment	3
		Subtotal: 6

Total Credit Hours: 21

Sociology and Criminology

Program Standards

Students must earn a grade of "C" or higher in all required core courses in the sociology and criminology programs, including the sociology and criminology minors. To successfully complete the sociology and criminology programs, as well as the sociology and criminology minors, students must earn a cumulative GPA of 2.25 in all courses included in these respective programs.

Criminology and Criminal Justice Area – Bachelor of Arts

The criminology program prepares students for a wide range of career opportunities in local, state and federal criminal justice agencies. Specific examples include correctional officer, probation and parole officer, counselor, case manager, police officer, youth officer and others. The criminology and criminal justice area is designed to familiarize students with 21st century best practices within the criminal justice system, like problem-solving courts, drug and mental health treatment and innovations in theoretical and empirical work in the study of the etiology, prevention and treatment of crime.

Program Competencies

1. Students will gain a fundamental knowledge of the criminal justice system, criminal justice courts, policing, the constitution and civil rights.
2. Students will develop professional communication skills and ethics in working with offenders and victims and practice these applied skills in the criminology practicum.
3. Students will become familiar with general sociological theory and theoretical explanations of crime and delinquency.
4. Students will develop the ability to read and understand criminological and sociological research methods and interpret the findings of such research.
5. Students will begin to understand the reciprocal relationships between the criminal justice system, criminal justice policies and crime.
6. Students will develop a working knowledge of the general concepts of sociological analysis, including exposure to selected substantive areas of sociology.
7. Students will develop skills in sociological research and reasoning, including research design, data analysis, report writing and computer literacy.
8. Students will develop reading skills, writing abilities and oral communication skills, so that they can apply sociological and criminological principles to criminal justice roles and explanations of criminal behavior and criminal justice system behavior.

Assessment

1. Exit examination required of all majors
2. Survey of graduates
3. Senior seminar

Program Requirements

General Education		
General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Students must earn a "C" or better in all program requirements. Students who do not earn a "C" must retake the course. Students must also maintain a 2.25 cumulative grade point average (GPA) across the area to continue in the program.

Core Requirements		
SOC 101	Introduction to Sociology	3
SOC 210 or CRIM 210	Sociology of Deviance	3
CRIM 250	Introduction to the Criminal Justice System	3
CRIM 317	Police Culture	3
SOC 380 or CRIM 380	Race, Class, Gender and Crime	3
CRIM 385	Contemporary Legal Issues in the Criminal Justice System	3
CRIM 388	Sociology of Punishment	3
CRIM 401	Criminology	3
SOC 405	Sociological Theory	3

SOC 450	Sociological Research	3
SOC 451	Quantitative Data Analysis	3
CRIM 499C	Senior Criminology Capstone	3
		Subtotal: 36

Electives

CRIM Electives	(choose 12 hours from CRIM)	12
		Subtotal: 12

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Sociology and Social Justice Major – Bachelor of Arts

Program Competencies

1. Students will gain a working knowledge of the general concepts of sociological analysis, including exposure to selected substantive areas of sociology.
2. Students will gain skills in sociological research, including research design, data analysis, report writing and computer literacy.
3. Students will gain reasoning skills and writing abilities so that they can apply sociological principles to their occupational roles.
4. Students will gain the ability to understand themselves and their society from a general liberal arts tradition.

Assessment

1. Exit examination required of all majors
2. Survey of graduates
3. Senior seminar

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Core Requirements

Students must maintain a "C" or higher in all sociology core requirements, as well as an overall 2.25 cumulative GPA.

SOC 101	Introduction to Sociology	3
SOC 210 or CRIM 210	Sociology of Deviance	3
SOC 380 or CRIM 380	Race, Class, Gender and Crime	3
SOC 405	Sociological Theory	3
SOC 450	Sociological Research	3
SOC 451	Quantitative Data Analysis	3
		Subtotal: 18

Global Elective

Choose one of the following:

SOC 305	Cultural Anthropology	3
SOC 325	Global Inequality	3
IST 250	International Culture and Diversity	3
IST 323	Global Culture	3
		Subtotal: 3

Inequality Elective

Choose one of the following:

SOC 300	Class, Power, and Privilege	3
SOC 343	Religion and Sexuality	3
SOC 350	Sex and Gender	3
SOC 374	Race and Ethnicity	3
		Subtotal: 3

Sociology Electives

Choose 12 hours of sociology electives, 9 of which must be 300-level or higher:

SOC 200 or higher	(choose one)	3
SOC 300 or higher	(choose three)	9
		Subtotal: 12

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Criminology Minor

Students must maintain a "C" or higher in all criminology minor requirements, as well as an overall cumulative 2.25 GPA.

Criminology Minor Requirements

Core Requirements

CRIM 250	Introduction to the Criminal Justice System	3
CRIM 380	Race, Class, Gender and Crime	3
CRIM 401	Criminology	3
		Subtotal: 9

Choose one of the following:

CRIM 317	Police Culture	3
CRIM 385	Contemporary Legal Issues in the Criminal Justice System	3
CRIM 388	Sociology of Punishment	3
		Subtotal: 3

Electives

Choose 12 hours from the following:

CRIM Electives	(choose 12 hours from CRIM)	12
		Subtotal: 12

Total Credit Hours: 24

Sociology Minor

Students must maintain a "C" or higher in all sociology core requirements, as well as an overall 2.25 cumulative GPA.

Sociology Minor Requirements

Core Requirements

SOC 101	Introduction to Sociology	3
SOC 405	Sociological Theory	3
SOC 450	Sociological Research	3
		Subtotal: 9

Electives

SOC	electives 200-level or above	3
SOC	electives 300-level or above	12
		Subtotal: 15

Total Credit Hours: 24

Gender Studies Minor

The Gender Studies minor educates students about the nature of gender dynamics and gender inequality, and situates individual experiences of

gender socialization in educational, historical, aesthetic, sociological and political contexts. The Gender Studies minor also equips students with the knowledge and analytical abilities needed to engage critically with gender-related issues, and recognize and transform gender inequality in their own lives and in the world at large.

Program Competencies

The purpose of the program is:

1. To challenge students to use a variety of critical thinking and problem-solving skills to recognize and contend with gender dynamics and inequality at the individual and social levels.
2. To develop students' understanding about the ways in which different cultures socialize members into gendered roles.
3. To expand students' knowledge, skills, and consciousness regarding their choices about institutionalized societal structures such as family, healthcare, education, political systems, work, and leisure.
4. To inform students of the diversity and impact of contributions from individuals of various identities throughout history and across academic disciplines in a multicultural and global society.

Gender Studies Minor Requirements

Core Requirements

GST 273	Introduction to Gender Studies	3
		Subtotal: 3

Electives

Choose 18 hours from the following options

GST	Electives	
NURS 303	Women's Health Care	3
NURS 304	Men's Health Issues	3
NURS 475	Human Sexuality	3
		Subtotal: 18

Total Credit Hours: 21

Cultural Competency Certificate

Program Competencies

1. Students will demonstrate knowledge, self-awareness, and application of basic diversity, inclusion, and equity concepts.
2. Students will demonstrate respect for the dignity of others.
3. Students will recognize that power and privilege influence relationships on interpersonal, intergroup, and institutional levels.
4. Students will demonstrate openness to ideas, beliefs, and practices that challenge their world view and move them to embrace a broader perspective.
5. Students will communicate their own responsibility in leading and promoting equity and justice in a global society.

Program Requirements

Core

SOC 101	Introduction to Sociology	3
IST 250	International Culture and Diversity	3
GST 273	Introduction to Gender Studies	3
GST/SOC 374	Race and Ethnicity	3
		Subtotal: 12

Electives

GST/SOC 300	Class, Power, and Privilege	3
GST/SOC 305	Cultural Anthropology	3
CRIM/SOC 325	Global Inequality	3
SOC/SWK 330	Health Structures and Behavior	3
CRIM/GST/SOC/SWK 337	Sociology of Food	3
CRIM/GST/SOC/SWK 343	Religion and Sexuality	3
GST/SOC 350	Sex and Gender	3
CRIM/GST/SOC/SWK 355	Sociology of the Body	3
CRIM/GST/SOC 380 or SWK 381	Race, Class, Gender, and Crime	3
HST 344	African American History	3
HST 321	The Middle East	3
HST 343	Religion in American History	3
HST 375	Twentieth Century Asian Wars	3
		Subtotal: 6

Total Credit Hours: 18

Military Science Department

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https://moreheadstate.edu/academics/colleges/humanities/humanities-social-sciences/military-science/

Army ROTC

The Department of Military Science is a Senior Reserve Officer Training Corps (ROTC) Instructor Group staffed by Army personnel. The department provides a curriculum that qualifies the college graduate for a commission as an officer in the U.S. Army, U.S. Army Reserve or the Army National Guard. Army ROTC is traditionally a four-year program consisting of basic (100- and 200-level) and advanced (300- and 400-level) courses. However, a two-year program is offered that enables juniors, community college students and others who missed ROTC during their first two years at MSU to qualify for a commission.

Military Science courses award elective academic credit and there is no obligation to serve in the military for taking the courses. Army ROTC instruction increases the opportunities for college students by expanding their experiences while in college, and by giving them options and potential for either a civilian or military career. Enrollment is initially open to all students.

Scholarships and Financial Assistance

Two-, three-, and four-year scholarships are available. The scholarships pay full tuition and fees, and include a payment for books or supplies. Additional benefits may be available. Information on Army ROTC and ROTC scholarships may be obtained from the Military Science Department, Morehead State University, 306 Button Auditorium, or by calling 606-783-5225.

Financial Assistance: All contracted cadets are paid a subsistence allowance (stipend) each month based on college standing for up to 10-months per year. Students enlisted in the United States Army Reserves (USAR) or Army National Guard (ARNG) may serve in the Simultaneous Membership Program (SMP) and receive additional benefits, including tuition assistance and enhanced drill pay.

Army Reserve Officer Training Corps Uniform, Books, and Supplies: Students enrolling in the Army ROTC program are issued U.S. Army uniforms, most ROTC required books and supplies by the Department of Military Science. Uniforms and equipment must be returned before commissioning or upon disenrollment from the Reserve Officers Training Corps program.

Program Information

Students interested in becoming an Army officer can participate in the ROTC program in order to meet the commissioning requirements. Students working to obtain a commission must be medically qualified, meet all pre-commissioning requirements (established by the Department of the Army), complete a program of study for a degree (bachelor's degree or higher), complete all general education requirements and complete three hours of a military history-related course from the selection below (or approved by the department chair); while maintaining at least a 2.0 GPA (2.5 for scholarship students). Those students completing the program will receive a commission as a Second Lieutenant in the U.S. Army, U.S. Army Reserves (USAR) or the Army National Guard (ARNG).

Two-Year Program

The two-year program is designed for transfer students and MSU students who wish to earn a commission as an Army officer, but did not participate in the four-year program. Students desiring to participate in the two-year program must first gain credit for basic military science courses. Qualified veterans, USAR and ARNG personnel may receive basic course credit for their prior service. College freshmen and sophomores, or other students with at least two years remaining in college, may gain credit for basic military science courses by completing a four-week ROTC leadership practicum at Fort Knox, Kentucky, conducted during the summer. Once the student receives basic course credit, he/she enrolls in the advanced course (see advanced course, above, in Four-Year Program) to complete the requirements of the program.

Four-Year Program

The four-year program is divided into two phases, the basic course and the advanced course.

The basic course (MS 100 and 200) is open to all students and begins the leadership development process. It is designed to acquaint students with the Army, introduce fundamental individual skills, introduce time management skills and teach students to develop their own capabilities. There is no military service obligation for students to participate in basic course classes.

The advanced course (MS 300 and 400) accepts students of high moral character who meet required medical, aptitude and GPA requirements. The Military Science Advanced Course is normally taken during the junior/senior or graduate years. Students learn land navigation, communications, small unit tactics, patrolling, military management, staff operations, logistics, army administration, military law, ethics and the Army system and culture. Students must meet eligibility requirements and sign a contract for commissioning with the U.S. Army. The general objective of these courses is to produce junior officers who will be the future officer leadership of the U.S. Army, U.S. Army Reserve, or the Army National Guard. Contracted Advanced Course students are required to attend the Leadership Development and Assessment Course (LDAC), normally between their junior and senior academic years. This course is mandatory for all students seeking a commission in the U.S. Army but registration for university credit is optional. Students attending this camp are paid and given travel allowance from their home to camp and back.

Military Science Minor

The following criteria must be met by all students in order to minor in military science:

1. Acceptance into the advanced course.
2. A cumulative GPA of 2.0 or better.
3. A GPA of 2.0 or better in the major field or area.
4. A GPA of 3.0 or better in military science.

The above standards may be waived, providing the cadet has a cumulative GPA of 2.25 or better, with the approval of a board consisting of the professor of military science, the dean of the Caudill College of Arts, Humanities and Social Sciences and a MS IV cadet who has the rank of cadet major or above.

Enrolled students may pursue a minor in military science by completing the following courses:

Military Science Minor Requirements

Required:

MS 301	Leading Small Organizations I	2
MS 301A	Advanced Leadership Laboratory	1
MS 302	Leading Small Organizations II	2
MS 302A	Advanced Leadership Laboratory	1
MS 401	Leadership Challenges and Goal Setting	2
MS 401A	Advanced Leadership Laboratory	1
MS 402	Transition to Lieutenant	2
MS 402A	Advanced Leadership Laboratory	1
Electives	300-level or above (as approved by military science advisor)	6
		Subtotal: 18

Electives

Take six to eight credit hours from the following MS courses:

MS 101	Introduction to Military Science	2
MS 101A	Leadership Laboratory	1
MS 102	Introduction to Leadership	2
MS 102A	Leadership Lab	1
MS 201	Self-Team Development	2
MS 201A	Leadership Laboratory	1
MS 202	Individual/Team Military Tactics	2
MS 202A	Leadership Laboratory	1
MS 339	Cooperative Education in Military Leadership	4
		Subtotal: 6-8

MS 339 — Cooperative Education in Military Leadership (required to commission as a Second Lieutenant. Requires prior approval/permission by the department chair.

Placement credit for these courses may be given to veterans, graduates of the college level ROTC summer programs and participants in high school level ROTC programs.

Total Credit Hours: 24-26

University Studies

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Associate of Arts - University Studies

Except for the 21-22 hours of general education requirements, no prescribed program of study is required for this degree. You may take a wide variety of subjects or concentrate all studies beyond the general education requirements in a single discipline. All other associate degree requirements must be met (see Associate Degree Requirements).

Program Competencies

Students will:

1. Speak effectively in conversational, small group, public or intercultural contexts.
2. Read college-level texts for comprehension.

3. Write effectively for a variety of target audiences using conventions associated with standard English.
4. Employ current research technologies in the process of locating, analyzing, evaluating and using information.
5. Analyze or evaluate diverse points of view.
6. Articulate ethical consequences of decisions or actions.
7. Apply knowledge and skills to new settings.
8. Analyze problems using arithmetic, geometric, algebraic or statistical methods.
9. Use deductive reasoning in a formal, symbolic, axiomatic system.
10. Verify answers to mathematical or scientific problems.

Program Requirements

The associate degree requires students to:

1. Complete a minimum of 60 credit hours of prescribed and elective college credit. See the academic programs section of this catalog for the specific requirements of your program. A prescribed program is not required for the Associate of Arts in University Studies.
2. Earn a minimum cumulative GPA of 2.0 on all work at the University.
3. Complete at least 21 credit hours at Morehead State University, including one semester preceding graduation.
4. Complete the three-credit hour FYS 101: First Year Seminar course during the first academic year if the student begins as a freshman or transfers to MSU with less than 24 credit hours.
5. For students with 24 or more transfer credit hours, the FYS 101 requirement is waived but the student must complete an additional course in social and behavioral sciences to meet general education requirements.
6. Complete 21-22 credit hours of general education requirements.

Electives

Electives 100-level and above	(chosen by student)	38-39
		Subtotal: 38-39

General Education

See associate degree general education section (p. 29) for a complete listing. Program requirements that are also general education requirements will count in both places (as applicable).

Level 1 Foundations

FYS 101	First Year Seminar	3
ENG 100	Writing I	3
ENG 200	Writing II	3
COMS 108	Fundamentals of Speech Communication	3
MATH 123, 131, 135, 152, 174, or 175	(Choose One)	3-4
		Subtotal: 15-16

Level 2 Knowledge Social & Behavioral Sciences (SBS)

ECON 101	Introduction to Economics	3
ECON 201	Principles of Macroeconomics	3
FIN 264	Personal Finance	3
HLTH 151	Wellness: Theory to Action	3
HST 261	American History since 1865	3
POLS 100	Introduction to Politics	3
POLS 140	United States Government	3
PSY 154	Introduction to Psychology	3
SOC 101	Introduction to Sociology	3
		Subtotal: 3

Level 3 Global Cultures Arts & Humanities (HUM)

ART 263	World Arts	3
COMS 250	Introduction to Intercultural Communication	3
COMS 290	Conflict and Communication	3
IST 101	Introduction to International Studies	3
IST 250	International Culture and Diversity	3
PHIL 106	Beginning Logic	3
POLS 110	Introduction to Political Theory	3
SPA 101	Spanish Language and Culture I	3
UTCH 250	Perspectives on Science and Mathematics	3
		Subtotal: 3

Total Credit Hours: 60

Bachelor of University Studies

Program Competencies

Students will:

1. Speak effectively in conversational, small group, public or intercultural contexts.
2. Write effectively for a variety of target audiences using conventions associated with Standard English.
3. Apply knowledge and skills to new settings.

Program Requirements

A major, minor or area is not required for the Bachelor of University Studies (BIS). Students may take a wide variety of subjects or concentrate all studies beyond the general education requirements in a single discipline.

A Bachelor of University Studies requires students to:

1. Complete a minimum of 120 credit hours of prescribed and elective college credit, 42 credit hours of which must be courses numbered 300 or above.
2. Earn a minimum cumulative GPA of 2.0 on all work completed at the University.
3. Complete at least 30 credit hours at Morehead State University, with the last 15 hours preceding graduation earned from MSU. Correspondence courses do not satisfy this requirement.
4. Complete 33 credit hours of general education courses. See the general education course requirements for a bachelor's degree.
5. Complete a three-credit hour FYS 101: First Year Seminar course during the first academic year if the student begins as a freshman or transfers to MSU with less than 24 credit hours.
6. For students with 24 or more transfer credit hours, the FYS 101 requirement is waived; however, the student must complete an additional course in SBS to meet general education requirements.

Note: Credit earned by a combination of correspondence courses and credit by examination cannot exceed 30 credit hours toward a baccalaureate degree or 15 credit hours toward an associate degree.

University Studies Requirements

Students must take a minimum of 42 hours of 300-level or higher courses.

MSU 499C	Senior Seminar	3
University Studies Electives	(chosen by student)	84
		Subtotal: 87

General Education

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Level 1

Foundations

FYS 101	First Year Seminar	3
ENG 100	Writing I	3
ENG 200	Writing II or	3
HON 200	The Ancient World	3
COMS 108	Fundamentals of Speech Communication	3
MATH 123, 131, 135, 152, 174, or 175	(Choose One)	3-4

Subtotal: 15-16

Level 2

Only one course may be chosen from each prefix in a category.

Knowledge - Natural Sciences (NSC)

Select two of the following (six hours):

AGR 185	Current Food and Energy Issues	3
ASTR 105, 112, or 125	Astronomy Elective	3
BIOL 105, 110, 155, 171, or 234	Biology Elective	3-4
CHEM 101 or 111	Chemistry Elective	4
ESS 102 or 108	ESS Elective	3-4
ETM 104 or 201	ETM Elective	3
GEO 103	Physical Geography	3
HON 215	Interdisciplinary Honors Core IV: The Modern World	3
MATH 125	Introduction to Biostatistics	3
NUTR 101	Nutrition and Well Being	3
PHYS 109	History of the Universe	3
PSY/NEUR 121	Introduction to Brain and Behavior	3
SCI/ETM/PHYS/SSE 123	Concepts & Experiences in Energy	3
SCI 104 or 111	Science Elective	3

Subtotal: 6

Knowledge - Arts and Humanities (HUM)

Choose one of the following (three hours):

ART 160	Understanding the Visual Arts	3
ENG 120 or ENG/IST 211	English Elective	3
FLM 170	Introduction to Film	3
HON 205	Interdisciplinary Honors Core II: The Medieval World	3
HST 271	World History Since 1500	3
MUSH 261	Global Musical Experience	3
PHIL 100	Beginning Philosophy	3
THEA 110	Introduction to Theatre	3

Subtotal: 3

Knowledge - Social and Behavioral Sciences (SBS)

Choose one of the following (three hours):

ECON 101 or 201	Economics Elective	3
EDF 207	Foundations of Education	3
FIN 264	Personal Finance	3
HLTH 151	Wellness: Theory to Action	3
HST 261	American History since 1865	3
POLS 100 or 140	Political Science Elective	3
PSY 154	Introduction to Psychology	3
SOC 101	Introduction to Sociology	3

Subtotal: 3

Level 3

Global Cultures - Arts and Humanities (HUM)

Choose one of the following (three hours):

ART 263	World Arts	3
COMS 250 or 290	Strategic Communication Elective	3
FRN 101	Beginning French I	3
IST 101 or 250	International Studies Elective	3
PHIL 106	Beginning Logic	3
POLS 110	Introduction to Political Theory	3
SPA 101	Spanish Language and Culture I	3
UTCH 250	Perspectives on Science and Mathematics	3

Subtotal: 3

Ethics and Civic Engagement - Social and Behavioral Sciences (SBS)

Choose one of the following (three hours):

APS 201	Introduction to Appalachia	3
CVM 210	Media Literacy	3
GST 273	Introduction to Gender Studies	3
HON 210	Interdisciplinary Honors Core III: The Renaissance and Enlightenment World	3
LGS 200	Law and Individual Rights	3
PHIL 103	Beginning Ethics	3
POLS 177 or 262	Political Science Elective	3
SOC 203	American Social Problems	3

Subtotal: 3

Total Credit Hours: 120

Bachelor of University Studies - Professional Studies Track

Program Competencies

Students will:

1. Speak effectively in conversational, small group, public or intercultural contexts.
2. Write effectively for a variety of target audiences using conventions associated with Standard English.
3. Apply knowledge and skills to new settings.

College of Science

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Agricultural Sciences

The specified course requirements must be taken in one of the following Agricultural Sciences tracks:

Agribusiness (p. 89), Agriculture Education (p. 88), Agronomy (p. 90), Animal Science (p. 91), Equine Science (p. 91), General Agriculture (p. 92), Golf Course Management (p. 93), or Horticulture (p. 94).

Agricultural Sciences Area (Agriculture Education Track) – Bachelor of Science

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

Students graduating from the Agricultural Sciences (Agriculture Education) – Bachelor of Science degree program should possess the following:

1. Written, oral, and interpersonal communication skills and basic math skills that will allow the individual to collect, analyze, interpret and present information that is used within the agriculture industry.
2. An understanding of the basic concepts of the physical and biological sciences and how these sciences are applicable to the field of agriculture.
3. An understanding of the importance of the arts, humanities, social and behavioral sciences and health sciences to humankind.
4. An understanding of and literacy in all disciplines of agriculture, especially to include the disciplines of animal science, equine science, agronomy, soils, horticulture, agricultural mechanics, pest management, agricultural economics, and farm management.
5. The ability to use effective planning in course organization in agricultural education.
6. The ability to plan daily instructional programs in agricultural education.
7. An understanding of occupational experience programs and their role in agricultural education.
8. An understanding of Future Farmers of America and supervised agricultural experience and their role in agricultural education.
9. An understanding of effective management of instructional programs in agricultural education.

Assessment

1. Exit examination, which covers all core classwork.
2. Surveys of graduating students, alumni, advisory groups, and employers.
3. Teacher certification examination for students in the Agriculture Education track.

Program Requirements

Courses marked with an asterisk (*) require admission to the Teacher Education Program. This track is designed and approved for students who wish to teach agriculture education in public schools in Kentucky or are interested in Cooperative Extension. Students seeking teacher certification must apply for and be admitted to the TEP. Students must have an overall GPA standing of 2.75 in their area courses before they will be permitted to take agricultural education courses. Students must be approved by the agricultural staff and recommended for certification.

General Education

MATH 135 or higher	(choose one)	3
General Education Courses	(See GNED Course Listings)	Variable
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Core Requirements

AGR 101	Foundations of Agriculture	3
AGR 102	Agricultural Experience	1
AGR 133	Introduction to Animal Science	3
AGR 180	Introduction to Field Crops	3
AGR 204	Agricultural Economics	3
AGR 261	Software Applications in Agriculture	3
AGR 301	Farm Management	3
AGR 307	Soils	4
AGR 402	Advanced Agricultural Experience	3
AGR 499C	Senior Seminar in Agriculture	3
		Subtotal: 29

Additional AGR Requirements

CHEM 101	Survey of Chemistry	4
CHEM 201	Survey of Organic Chemistry	4
MATH 135, 152, 174, or 175	(Math Elective - choose one)	3
		Subtotal: 11

Agr Education Track Requirements

AGR 215	Horticultural Science	3
AGR 251	Introduction to Agricultural Mechanics	3
AGR 300	Pest Management	3
		Subtotal: 9

Agr Education Track Electives

Select one course from each area below.

Agricultural Mechanics

AGR 350	Farm Power and Machinery Management	3
ETM 387	Fundamentals of Metallurgy and Joining Technology	3
		Subtotal: 3

Animal Science

AGR 222	Livestock Evaluation	3
AGR 243	Equine Health and Disease	3
AGR 316	Feeds and Feeding	3
AGR 330	Livestock Improvement	3
AGR 336	Dairy Production	3
AGR 337	Poultry Production	3
AGR 342	Horse Production	3
AGR 343	Beef Production	3
AGR 344	Swine Production	3
AGR 345	Sheep Production	3
		Subtotal: 3

Soil Science

AGR 311	Soil Conservation	3
AGR 312	Soil Fertility and Fertilizers	3
		Subtotal: 3

Professional Education Requirements

CTE 207	Foundations of Career and Technical Education	3
CTE 388	Methods of Curriculum Development*	3
CTE 392	Methods of Instructional Technology*	3
CTE 470	Methods of Instruction*	3
CTE 478	Student Teaching Practicum*	12
CTE 496	Organization and Management of the Laboratory	2
EDF 211	Human Growth and Development	3
EDSP 230	Education of Exceptional Children	3
EDUC 476	Content Area Literacy*	3
		Subtotal: 35

Total Credit Hours: 120

Agricultural Sciences Area (Agribusiness Track) – Bachelor of Science

Program Competencies

Students graduating from the Agricultural Sciences (Agribusiness) – Bachelor of Science degree program should possess the following:

1. Written, oral, and interpersonal communication skills and basic math skills that will allow the individual to collect, analyze, interpret and present information that is used within the agriculture industry.
2. An understanding of the basic concepts of the physical and biological sciences and how these sciences are applicable to the field of agriculture.
3. An understanding of the importance of the arts, humanities, social and behavioral sciences and health sciences to humankind.
4. An understanding of and literacy in all disciplines of agriculture, especially to include the disciplines of animal science, equine science, agronomy, soils, horticulture, agricultural mechanics, pest management, agricultural economics, and farm management.
5. An understanding of the principles of accounting and how they are used in agriculture.

Assessment

1. Exit examination which covers all core classwork.
2. Surveys of graduating students, alumni, advisory groups, and employers.

Program Requirements

General Education

MATH 135 or higher	(choose one)	3
General Education Courses	(See GNED Course Listings)	Variable
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements

that are also general education requirements will count in both places (as applicable).

Area Core Requirements

AGR 101	Foundations of Agriculture	3
AGR 102	Agricultural Experience	1
AGR 133	Introduction to Animal Science	3
AGR 180	Introduction to Field Crops	3
AGR 204	Agricultural Economics	3
AGR 261	Software Applications in Agriculture	3
AGR 301	Farm Management	3
AGR 307	Soils	4
AGR 402	Advanced Agricultural Experience	3
AGR 499C	Senior Seminar in Agriculture	3
		Subtotal: 29

Additional AGR Requirements

CHEM 101	Survey of Chemistry	4
CHEM 201	Survey of Organic Chemistry	4
MATH 135, 152, 174, or 175	(Math Elective - choose one)	3
		Subtotal: 11

Agribusiness Track Requirements

ACCT 281	Principles of Financial Accounting	3
AGR 302	Agriculture Finance	3
AGR 305	Marketing of Farm Products	3
AGR 385	Agribusiness Management	3
AGR 405	Farm Business Analysis	3
		Subtotal: 15

Agribusiness Electives

Complete nine hours from the following:

ACCT 282	Principles of Managerial Accounting	3
ACCT 387	Income Tax	3
AGR 303	Land Economics	3
AGR 386	Introduction to Agricultural Policy	3
BBA 261	Business Law and Regulations	3
FIN 252	Mathematics of Finance	3
FIN 264	Personal Finance	3
MKT 204	Marketing	3
MKT 350	Professional Selling	3
MKT 354	Consumer Behavior	3
MNGT 201	Principles of Management	3
MNGT 311	Human Resource Management	3
MNGT 362	The Legal Environment and Business Practices	3
		Subtotal: 9

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Agricultural Sciences Area (Agronomy Track) – Bachelor of Science

Program Competencies

Students graduating from the Agricultural Sciences (Agronomy) – Bachelor of Science degree program should possess the following:

1. Written, oral, and interpersonal communication skills and basic math skills that will allow the individual to collect, analyze, interpret and present information that is used within the agriculture industry.
2. An understanding of the basic concepts of the physical and biological sciences and how these sciences are applicable to the field of agriculture.
3. An understanding of the importance of the arts, humanities, social and behavioral sciences and health sciences to humankind.
4. An understanding of and literacy in all disciplines of agriculture, especially to include the disciplines of animal science, equine science, agronomy, soils, horticulture, agricultural mechanics, pest management, agricultural economics, and farm management.
5. An understanding of and the ability to apply the principles of soil conservation and weed science to crop production and also an understanding of how certain crops are utilized by farm animals.

Assessment

1. Exit examination which covers all core classwork.
2. Surveys of graduating students, alumni, advisory groups, and employers.

Program Requirements

General Education

MATH 135 or higher	(choose one)	3
General Education Courses	(See GNED Course Listings)	Variable
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Core Requirements

AGR 101	Foundations of Agriculture	3
AGR 102	Agricultural Experience	1
AGR 133	Introduction to Animal Science	3
AGR 180	Introduction to Field Crops	3
AGR 204	Agricultural Economics	3
AGR 261	Software Applications in Agriculture	3
AGR 301	Farm Management	3
AGR 307	Soils	4
AGR 402	Advanced Agricultural Experience	3
AGR 499C	Senior Seminar in Agriculture	3
		Subtotal: 29

Additional AGR Requirements

CHEM 101	Survey of Chemistry	4
CHEM 201	Survey of Organic Chemistry	4
MATH 135, 152, 174, or 175	(Math Elective - choose one)	3
		Subtotal: 11

Agronomy Track Requirements

AGR 215	Horticultural Science	3
AGR 251	Introduction to Agricultural Mechanics	3
AGR 300	Pest Management	3
AGR 308	Weed Science	3
AGR 311	Soil Conservation	3
AGR 384	Forage Crops	3
		Subtotal: 18

Agronomy Electives

Choose nine hours from the following, with advisor approval:

AGR 303	Land Economics	3
AGR 312	Soil Fertility and Fertilizers	3
AGR 314	Plant Propagation	3
AGR 316	Feeds and Feeding	3
AGR 319	Herbs	3
AGR 320	Principles of Vegetable Production	3
AGR 325	Turf Management	3
AGR 350	Farm Power and Machinery Management	3
		Subtotal: 9

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Agricultural Sciences Area (Animal Science Track) – Bachelor of Science

The animal science track is designed to prepare the graduate for a career in the animal agriculture industry and/or admission to a graduate program in animal science. As the admission requirements for each graduate program varies, it is essential to work closely with an animal science advisor to assure that the appropriate courses are taken. Completion of this degree track does not guarantee admission to a graduate program.

Program Competencies

Students graduating from the Agricultural Sciences (Animal Science) – Bachelor of Science degree program should possess the following:

1. Written, oral, and interpersonal communication skills and basic math skills that will allow the individual to collect, analyze, interpret and present information that is used within the agriculture industry.
2. An understanding of the basic concepts of the physical and biological sciences and how these sciences are applicable to the field of agriculture.
3. An understanding of the importance of the arts, humanities, social and behavioral sciences and health sciences to humankind.
4. An understanding of and literacy in all disciplines of agriculture, especially to include the disciplines of animal science, equine science, agronomy, soils, horticulture, agricultural mechanics, pest management, agricultural economics, and farm management.
5. An understanding of and the ability to demonstrate techniques used in the reproduction, husbandry, evaluation and feed of farm animals.

Assessment

1. Exit examination which covers all core classwork.
2. Surveys of graduating students, alumni, advisory groups, and employers.

Program Requirements

General Education

MATH 135 or higher	(choose one)	3
General Education Courses	(See GNED Course Listings)	Variable

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Core Requirements

AGR 101	Foundations of Agriculture	3
AGR 102	Agricultural Experience	1
AGR 133	Introduction to Animal Science	3
AGR 180	Introduction to Field Crops	3
AGR 204	Agricultural Economics	3
AGR 261	Software Applications in Agriculture	3
AGR 301	Farm Management	3
AGR 307	Soils	4
AGR 402	Advanced Agricultural Experience	3
AGR 499C	Senior Seminar in Agriculture	3

Subtotal: 29

Additional AGR Requirements

CHEM 101	Survey of Chemistry	4
CHEM 201	Survey of Organic Chemistry	4
MATH 135, 152, 174, or 175	(Math Elective - choose one)	3

Subtotal: 11

Animal Science Track Requirements

AGR 143	Anatomy and Physiology of Livestock	3
AGR 222	Livestock Evaluation	3
AGR 316	Feeds and Feeding	3
AGR 330	Livestock Improvement	3
AGR 420	Farm Animal Reproduction	3

Subtotal: 15

Animal Science Electives

Species Production

Choose nine hours from the following:

AGR 310	Stocker and Feedlot Management	3
AGR 336	Dairy Production	3
AGR 337	Poultry Production	3
AGR 343	Beef Production	3
AGR 344	Swine Production	3
AGR 345	Sheep Production	3

Subtotal: 9

Additional Electives

Choose one course from two of the following groups:

Group A

AGR 233	Animal Diseases and Parasites	3
AGR 243	Equine Health and Disease	3
AGR 306	Principles of Epidemiology in Agriculture	3

Group B

AGR 338	Livestock Judging	3
AGR 384	Forage Crops	3
AGR 410	Principles of Meat Science	3
AGR 415	Animal Nutrition	3

Group C

AGR 342	Horse Production	3
AGR 355	Applied Domestic Animal Behavior	3
AGR 380	Equine Management	3
AGR 480	Equine Breeding and Reproduction	3

Subtotal: 6

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Agricultural Sciences Area (Equine Science Track) – Bachelor of Science

Program Competencies

Students graduating from the Agricultural Sciences (Equine Science) – Bachelor of Science degree program should possess the following:

1. Written, oral, and interpersonal communication skills and basic math skills that will allow the individual to collect, analyze, interpret and present information that is used within the agriculture industry.
2. An understanding of the basic concepts of the physical and biological sciences and how these sciences are applicable to the field of agriculture.
3. An understanding of the importance of the arts, humanities, social and behavioral sciences and health sciences to humankind.

4. An understanding of and literacy in all disciplines of agriculture, especially to include the disciplines of animal science, equine science, agronomy, soils, horticulture, agricultural mechanics, pest management, agricultural economics, and farm management.

Assessment

1. Exit examination which covers all core classwork.
2. Surveys of graduating students, alumni, advisory groups, and employers.

Program Requirements

General Education

MATH 135 or higher	(choose one)	3
General Education Courses	(See GNED Course Listings)	Variable
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Core Requirements

AGR 101	Foundations of Agriculture	3
AGR 102	Agricultural Experience	1
AGR 133	Introduction to Animal Science	3
AGR 180	Introduction to Field Crops	3
AGR 204	Agricultural Economics	3
AGR 261	Software Applications in Agriculture	3
AGR 301	Farm Management	3
AGR 307	Soils	4
AGR 402	Advanced Agricultural Experience	3
AGR 499C	Senior Seminar in Agriculture	3
		Subtotal: 29

Additional AGR Requirements

CHEM 101	Survey of Chemistry	4
CHEM 201	Survey of Organic Chemistry	4
MATH 135, 152, 174, or 175	(Math Elective - choose one)	3
		Subtotal: 11

Equine Sciences Track Requirements

AGR 143	Anatomy and Physiology of Livestock	3
AGR 233	Animal Diseases and Parasites	3
AGR 243	Equine Health and Disease	3
AGR 316	Feeds and Feeding	3
AGR 342	Horse Production	3
AGR 380	Equine Management	3
AGR 480	Equine Breeding and Reproduction	3
		Subtotal: 21

Equine Science Electives

Choose nine hours from the following:

AGR 221	Equitation	3
AGR 245	Horseshoeing	3
AGR 329	Advanced Stock Seat Horsemanship	3
AGR 330	Livestock Improvement	3
AGR 332	Advanced Saddle Seat Horsemanship	3
AGR 333	Advanced Hunt Seat Horsemanship	3
AGR 335	Equitation Teaching	3
AGR 355	Applied Domestic Animal Behavior	3
AGR 384	Forage Crops	3
AGR 415	Animal Nutrition	3
AGR 420	Farm Animal Reproduction	3
AGR 444	Animal Health and Therapeutics	3
		Subtotal: 9

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Agricultural Sciences Area (General Agriculture Track) – Bachelor of Science

Program Competencies

Students graduating from the Agricultural Sciences (General Agriculture) – Bachelor of Science degree program should possess the following:

1. Written, oral, and interpersonal communication skills and basic math skills that will allow the individual to collect, analyze, interpret and present information that is used within the agriculture industry.
2. An understanding of the basic concepts of the physical and biological sciences and how these sciences are applicable to the field of agriculture.
3. An understanding of the importance of the arts, humanities, social and behavioral sciences and health sciences to humankind.
4. An understanding of and literacy in all disciplines of agriculture, especially to include the disciplines of animal science, equine science, agronomy, soils, horticulture, agricultural mechanics, pest management, agricultural economics, and farm management.

Assessment

1. Exit examination which covers all core classwork.
2. Surveys of graduating students, alumni, advisory groups, and employers.

Program Requirements

General Education

MATH 135 or higher	(choose one)	3
General Education Courses	(See GNED Course Listings)	Variable
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Core Requirements

AGR 101	Foundations of Agriculture	3
AGR 102	Agricultural Experience	1
AGR 133	Introduction to Animal Science	3
AGR 180	Introduction to Field Crops	3
AGR 204	Agricultural Economics	3
AGR 261	Software Applications in Agriculture	3
AGR 301	Farm Management	3
AGR 307	Soils	4
AGR 402	Advanced Agricultural Experience	3
AGR 499C	Senior Seminar in Agriculture	3
		Subtotal: 29

Additional AGR Requirements

CHEM 101	Survey of Chemistry	4
CHEM 201	Survey of Organic Chemistry	4
MATH 135, 152, 174, or 175	(Math Elective - choose one)	3
		Subtotal: 11

General Agriculture Track Requirements

AGR 215	Horticultural Science	3
AGR 251	Introduction to Agricultural Mechanics	3
AGR 300	Pest Management	3

AGR 350	Farm Power and Machinery Management	3
		Subtotal: 12

General Agriculture Electives

Agriculture Economics — Choose three hours from the following:

AGR 302	Agriculture Finance	3
AGR 303	Land Economics	3
AGR 305	Marketing of Farm Products	3
AGR 385	Agribusiness Management	3
AGR 386	Introduction to Agricultural Policy	3
AGR 405	Farm Business Analysis	3
		Subtotal: 3

Animal Science — Choose six hours from the following:

AGR 222	Livestock Evaluation	3
AGR 243	Equine Health and Disease	3
AGR 306	Principles of Epidemiology in Agriculture	3
AGR 310	Stocker and Feedlot Management	3
AGR 316	Feeds and Feeding	3
AGR 330	Livestock Improvement	3
AGR 336	Dairy Production	3
AGR 337	Poultry Production	3
AGR 338	Livestock Judging	3
AGR 342	Horse Production	3
AGR 343	Beef Production	3
AGR 344	Swine Production	3
AGR 345	Sheep Production	3
AGR 380	Equine Management	3
AGR 415	Animal Nutrition	3
		Subtotal: 6

Plant Science — Choose six hours from the following:

AGR 212	Landscape Plants	3
AGR 213	Landscape Design	3
AGR 224	Greenhouse Operations	3
AGR 308	Weed Science	3
AGR 314	Plant Propagation	3
AGR 315	Fruit Production	3
AGR 317	Floral Design	3
AGR 318	Landscape Maintenance	3
AGR 319	Herbs	3
AGR 320	Principles of Vegetable Production	3
AGR 323	Interior Plantscaping	3
AGR 324	Greenhouse Structures	3
AGR 325	Turf Management	3
AGR 326	Nursery Management	3
AGR 328	Floral Crop Production	3
AGR 384	Forage Crops	3
		Subtotal: 6

Soil Science — Choose three hours from the following:

AGR 311	Soil Conservation	3
AGR 312	Soil Fertility and Fertilizers	3
		Subtotal: 3

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Agricultural Sciences Area (Golf Course Management Track) – Bachelor of Science

Program Competencies

Students graduating from the Agricultural Sciences (Golf Course Management) – Bachelor of Science degree program should possess the following:

1. Written, oral, and interpersonal communication skills and basic math skills that will allow the individual to collect, analyze, interpret and present information that is used within the agriculture industry.
2. An understanding of the basic concepts of the physical and biological sciences and how these sciences are applicable to the field of agriculture.
3. An understanding of the importance of the arts, humanities, social and behavioral sciences and health sciences to humankind.
4. An understanding of and literacy in all disciplines of agriculture, especially to include the disciplines of animal science, equine science, agronomy, soils, horticulture, agricultural mechanics, pest management, agricultural economics, and farm management.
5. An understanding of the selection, establishment, and maintenance of plants used on the golf course.
6. An understanding of the business, horticultural, and recreational aspects of golf course management.

Assessment

1. Exit examination which covers all core classwork.
2. Surveys of graduating students, alumni, advisory groups, and employers.

Program Requirements

General Education

MATH 135 or higher	(choose one)	3
General Education Courses	(See GNED Course Listings)	Variable
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Core Requirements

AGR 101	Foundations of Agriculture	3
AGR 102	Agricultural Experience	1
AGR 133	Introduction to Animal Science	3
AGR 180	Introduction to Field Crops	3
AGR 204	Agricultural Economics	3
AGR 261	Software Applications in Agriculture	3
AGR 301	Farm Management	3
AGR 307	Soils	4
AGR 402	Advanced Agricultural Experience	3
AGR 499C	Senior Seminar in Agriculture	3
		Subtotal: 29

Additional AGR Requirements

CHEM 101	Survey of Chemistry	4
CHEM 201	Survey of Organic Chemistry	4
MATH 135, 152, 174, or 175	(Math Elective - choose one)	3
		Subtotal: 11

Golf Course Management Track Requirements

AGR 212	Landscape Plants	3
AGR 215	Horticultural Science	3
AGR 308	Weed Science	3
AGR 318	Landscape Maintenance	3
AGR 325	Turf Management	3
MNGT 201	Principles of Management	3
MKT 204	Marketing	3
SPMT 307	Sport Marketing	3
SPMT 402	Planning, Designing, and Managing Sport and Physical Activity Facilities	3
		Subtotal: 27

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Agricultural Sciences Area (Horticulture Track) – Bachelor of Science

Program Competencies

Students graduating from the Agricultural Sciences (Horticulture) – Bachelor of Science degree program should possess the following:

1. Written, oral, and interpersonal communication skills and basic math skills that will allow the individual to collect, analyze, interpret and present information that is used within the agriculture industry.
2. An understanding of the basic concepts of the physical and biological sciences and how these sciences are applicable to the field of agriculture.
3. An understanding of the importance of the arts, humanities, social and behavioral sciences and health sciences to humankind.
4. An understanding of and literacy in all disciplines of agriculture, especially to include the disciplines of animal science, equine science, agronomy, soils, horticulture, agricultural mechanics, pest management, agricultural economics, and farm management.
5. An understanding of the basic principles involved in the production and propagation of horticultural plants.

Assessment

1. Exit examination which covers all core classwork.
2. Surveys of graduating students, alumni, advisory groups, and employers.

Program Requirements

General Education

MATH 135 or higher	(choose one)	3
General Education Courses	(See GNED Course Listings)	Variable

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Core Requirements

AGR 101	Foundations of Agriculture	3
AGR 102	Agricultural Experience	1
AGR 133	Introduction to Animal Science	3
AGR 180	Introduction to Field Crops	3
AGR 204	Agricultural Economics	3
AGR 261	Software Applications in Agriculture	3
AGR 301	Farm Management	3
AGR 307	Soils	4
AGR 402	Advanced Agricultural Experience	3
AGR 499C	Senior Seminar in Agriculture	3

Subtotal: 29

Additional AGR Requirements

CHEM 101	Survey of Chemistry	4
CHEM 201	Survey of Organic Chemistry	4
MATH 135, 152, 174, or 175	(Math Elective - choose one)	3

Subtotal: 11

Horticulture Track Requirements

AGR 215	Horticultural Science	3
AGR 300	Pest Management	3
AGR 350	Farm Power and Machinery Management	3

Subtotal: 9

Horticulture Track Electives

Choose 21 hours from the following:

AGR 185	Current Food and Energy Issues	3
AGR 212	Landscape Plants	3
AGR 213	Landscape Design	3
AGR 224	Greenhouse Operations	3
AGR 308	Weed Science	3
AGR 311	Soil Conservation	3
AGR 312	Soil Fertility and Fertilizers	3
AGR 314	Plant Propagation	3
AGR 315	Fruit Production	3
AGR 317	Floral Design	3
AGR 318	Landscape Maintenance	3
AGR 319	Herbs	3
AGR 320	Principles of Vegetable Production	3
AGR 323	Interior Plantscaping	3
AGR 324	Greenhouse Structures	3
AGR 325	Turf Management	3
AGR 326	Nursery Management	3
AGR 327	Advanced Landscape Design	3
AGR 328	Floral Crop Production	3

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Agriculture Major - Bachelor of Science

Program Competencies

Students graduating from the Agriculture Major – Bachelor of Science degree program should possess the following:

1. Written, oral, and interpersonal communication skills and basic math skills that will allow the individual to collect, analyze, interpret and present information that is used within the agriculture industry.
2. An understanding of the basic concepts of the physical and biological sciences and how these sciences are applicable to the field of agriculture.
3. An understanding of the importance of the arts, humanities, social and behavioral sciences and health sciences to humankind.
4. An understanding of and literacy in all disciplines of agriculture, especially to include the disciplines of animal science, equine science, agronomy, soils, horticulture, agricultural mechanics, pest management, agricultural economics, and farm management.

Assessment

1. Exit examination.
2. Surveys of graduating students, alumni, advisory groups, and employers.

Program Requirements

General Education

MATH 135 or higher	(choose one)	3
General Education Courses	(See GNED Course Listings)	Variable

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements

that are also general education requirements will count in both places (as applicable).

Major Core Requirements

AGR 101	Foundations of Agriculture	3
AGR 102	Agricultural Experience	1
AGR 133	Introduction to Animal Science	3
AGR 180	Introduction to Field Crops	3
AGR 204	Agricultural Economics	3
AGR 261	Software Applications in Agriculture	3
AGR 301	Farm Management	3
AGR 307	Soils	4
AGR 402	Advanced Agricultural Experience	3
AGR 499C	Senior Seminar in Agriculture	3
		Subtotal: 29

Additional AGR Requirements

CHEM 101	Survey of Chemistry	4
CHEM 201	Survey of Organic Chemistry	4
MATH 135, 152, 174, or 175	(Math Elective - choose one)	3
		Subtotal: 11

Agriculture Electives

Choose six hours from AGR

AGR	Electives	6
		Subtotal: 6

Minor

All majors must also have a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Agriculture Minor

The student must complete the following agriculture course plus five semester hours of approved agriculture courses, and a major selected in another field. General course electives may also be taken in agriculture and related areas by students wishing greater depth in agriculture.

Agriculture Minor Requirements

Core Requirements

AGR 101	Foundations of Agriculture	3
AGR 133	Introduction to Animal Science	3
AGR 180	Introduction to Field Crops	3
AGR 204	Agricultural Economics	3
AGR 307	Soils	4
AGR 215	Horticultural Science	3
		Subtotal: 19

Electives

Electives	Approved AGR courses	5
		Subtotal: 5

Total Credit Hours: 24

Horsemanship Minor

The student must complete a minimum of 21 credit hours of agriculture courses in the following list and a major selected in another field. General course electives may also be taken in horsemanship, agriculture and related areas by students wishing greater depth in horsemanship.

Horsemanship Minor Requirements

Core Requirements

AGR 221	Equitation	3
AGR 243	Equine Health and Disease	3
AGR 335	Equitation Teaching	3
AGR 342	Horse Production	3
		Subtotal: 12

Electives

Choose six hours from the following:

AGR 329	Advanced Stock Seat Horsemanship	3
AGR 332	Advanced Saddle Seat Horsemanship	3
AGR 333	Advanced Hunt Seat Horsemanship	3
		Subtotal: 6

Choose three hours from approved electives:

Approved Electives	(choose three hours)	3
		Subtotal: 3

Total Credit Hours: 21

Veterinary Science Area - Bachelor of Science

The Bachelor of Science - Area in Veterinary Science program is specifically designed to address the needs of pre-veterinary students. See the Pre-Veterinary Science information for more information.

Students (including transfers) entering the Bachelor of Science - Area in Veterinary Science program must have been accepted into Morehead State University. Enrollment will be based on the cap size for individual courses. The BS-VS program will have no specific cap.

Program Competencies

1. Strong and focused knowledge of agricultural, biological, and physical sciences which will enhance the student's ability to perform and thrive in the veterinary science curriculum.
2. Advanced knowledge in biological systems, comparative anatomy, microbiology and biomedical physics.
3. Advanced knowledge in animal physiology, health issues with livestock and reproductive physiology.

Program Requirements

General Education

MATH 174 or 175	(choose one)	3-4
General Education Courses	(See GNED Course Listings)	Variable
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Core Requirements

AGR 133	Introduction to Animal Science	3
AGR 143	Anatomy and Physiology of Livestock	3
AGR 243	Equine Health and Disease	3
AGR 316	Feeds and Feeding	3
BIOL 210	General Zoology	4
BIOL 301	Fundamentals of Biochemistry	4
BIOL 304	Genetics	3
BIOL 317	Principles of Microbiology	4
BIOL 380	Cell Biology	3
BIOL 171	Principles of Biology	4
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 326	Organic Chemistry I	4
CHEM 327	Organic Chemistry II	4
MATH 174 or 175	(choose one)	3-4

PHYS 201	Elementary Physics I	4
AGR or VET 499C	Capstone	3
		Subtotal: 60-61

Program Science Electives

Students may choose, in consultation with their advisor, any 300-level or higher course from the College of Science.

Science Elective	300-level or higher from the College of Science	18
		Subtotal: 18

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Pre-Veterinary Medicine

The pre-veterinary medicine program is a pre-professional program designed to prepare students for admission to a college of veterinary medicine to earn the Doctor of Veterinary Medicine (DVM) degree. Completion of the pre-veterinary requirements takes three-four years; then veterinary college takes another four years of study.

Since each veterinary college has its own specific admission requirements, it is essential that students work closely with a pre-veterinary advisor throughout the process.

Admission to veterinary college is very state-oriented. States that have veterinary colleges give priority to their own residents but may contract with states that do not have veterinary colleges to accept a certain number of nonresident students each year. In addition, a limited number of out-of-state, noncontract positions may be available. In-state and contract applicants have approximately a one in three chance of acceptance; while out-of-state, noncontract applicants have about a one in 10 chance of acceptance.

The Commonwealth of Kentucky is a participating member in the Southern Regional Education Board Contract Program under which legal Kentucky residents may attend veterinary college at Auburn University or Tuskegee University in Alabama. Students accepted to veterinary college under this contract program pay only the in-state tuition of that university.

Residents of states other than Kentucky may complete the pre-veterinary requirements for the veterinary college of their state at Morehead State University. West Virginia residents may apply under contract to Ohio State University, University of Georgia, and Tuskegee University. The transfer of courses to satisfy the specific requirements of a particular college must be negotiated in advance to assure acceptance. Students must work closely with the pre-veterinary advisor in making the appropriate contacts.

Although a degree is not required for admission to veterinary college, it is advisable to work toward a degree in conjunction with the pre-veterinary requirements. All applicants are not accepted and one must have a suitable degree to build an alternate career. Suitable degree programs include veterinary science, veterinary technology, and biology. The Bachelor of Science - Area in Veterinary Science program is specifically designed to address the needs of pre-veterinary students. For further information contact:

Pre-Veterinary Advisor
25 MSU Farm Drive
Morehead, KY 40351
606-783-2326

Veterinary Technology – Associate of Applied Science

(Six-Semester Program)

The MSU veterinary technology associate program is approved by the Kentucky Veterinary Medical Association and fully accredited by the American Veterinary Medical Association. Graduates are eligible to sit for the Veterinary Technician National Exam for state licensure as a credentialed Veterinary Technician or Technologist.

The veterinary technology program has a selective admission policy which is separate from and in addition to the University's admission procedures and the program has limited enrollment. In the event there are more qualified applicants than positions, students with the highest college GPA will be accepted. Admission to the University does not guarantee admission to the veterinary technology program. The associate degree in veterinary technology is a face-to-face program with classes requiring attendance on the Morehead campus. It is not an online program and classroom and laboratory attendance is expected.

In addition to acceptance by the University, applicants must apply for admission to the veterinary technology associate program and meet the following criteria:

Admission Requirements

Note: Enrollment in the AAS Veterinary Technology curriculum will be limited to 40 students.

In order to be admitted to the AAS Veterinary Technology Program, the student must obtain:

1. Admission to Morehead State University.
2. Admission to Veterinary Technology Program.
   a. Prerequisite Courses and GPA Requirements:
      i. Students entering the core veterinary technology curriculum from the pre-vet tech curriculum must have a college GPA of 2.8 or greater in non-developmental, college level courses 100-level or above to be accepted into the veterinary technology program and a 2.6 or greater GPA in specified science and math courses (MATH 131 or higher approved general education math, BIOL 105, and CHEM 101 or higher). Grades in required AGR, BIOL, CHEM and MATH courses must be "C" or better.
      ii. Transfer students must have a college GPA of 2.8 or greater in 12 or more hours of non-developmental, college level courses 100-level or above to be accepted into the veterinary technology program and a 2.6 or greater GPA in specified science and math courses (MATH 131 or higher approved general education math, BIOL 105 or transfer equivalent, and CHEM 101 or higher). Grades in required BIOL, CHEM and MATH courses must be "C" or better.
      iii. Approved non-developmental, college-level course work may include:
         - General education courses applicable to the Veterinary Technology Associate Degree Program;
         - Animal science, biology, chemistry, mathematics, computer skills, medical terminology, office management or ethics.
   b. All applicants:
      i. Minimum 120 hours of documented veterinary supervised work/volunteer experience.
      ii. Written recommendation from the above veterinarian.
      iii. Complete the Animal Care Worker Compliance (ACWC) upon admission to the program.
         - Veterinary Technology students must possess the health, physical capability, and risk assessment compatible with working with live animals in a veterinary medical context. The ACWC requirements are designed to assure adequate ability to work with live animals, perform the required tasks and avoid undue risk of injury or disease.

- Confidentiality of ACWC status: It is not required that any student divulge confidential medical information to the program faculty. They must only verify, through their physician, that they meet the ACWC requirements.
- Compliance in MSU Occupational Health for Animal Workers program which includes risk training, risk assessment, and tetanus and pre-exposure rabies immunization requirements.

Veterinary Technology Student Handbook

The Veterinary Technology Program Student Handbook is a supplement to the Morehead State University Undergraduate Catalog. The student handbook contains policies and guidelines related specifically to Morehead State University's Veterinary Technology Program. The handbook is reviewed and revised annually.

It is the student's responsibility to read the University Undergraduate Catalog, the Veterinary Technology Program Student Handbook, and the official notices. It is the student's responsibility to abide by the regulations of the University and the guidelines and policies set forth in the Veterinary Technology Program Student Handbook. Violation of policies within the handbook may result in dismissal from the program.

Program Competencies

Students receiving an Associate of Applied Science degree in Veterinary Technology should possess competencies in the following areas as defined by the American Veterinary Medical Association:

1. General Competencies:
   a. Written, oral and interpersonal communication skills.
   b. Applied mathematical skills applicable to the field of veterinary technology.
   c. An awareness of the physical and biological concepts applicable to the field of veterinary technology.
   d. An appreciation of the liberal arts.
2. Specific Competencies:
   a. Anesthesia, including induction, monitoring and instrumentation.
   b. Animal husbandry, restraint, behavior, breed identification, reproduction, and human-animal bonding.
   c. Diseases, preventive medicine, nursing of companion animals, food animals, horses and laboratory animals.
   d. Economics of veterinary practice.
   e. Ethics, professionalism and legal applications in veterinary medicine.
   f. Humane animal care and management.
   g. Basic laboratory animal technology.
   h. Medical terminology.
   i. Necropsy techniques.
   j. Nutrition and principles of feeding.
   k. Orientation to the vocation of veterinary technology.
   l. Pharmacology for veterinary technicians.
   m. Principles of imaging, including radiography and ultrasonography.
   n. Professional organizations and continuing education for graduate technicians.
   o. Surgical nursing and assisting, including instrumentation.
   p. Technician utilization and team concepts of healthcare delivery.
   q. Veterinary anatomy and physiology.
   r. Veterinary clinical pathology and parasitology.
   s. Veterinary microbiology and immunology.
   t. Veterinary office management.
   u. Elementary computer skills pertaining to veterinary technology.
   v. Zoonoses, occupational health hazards and waste disposal.
3. In addition, students should have the skills necessary to assume responsibility for self-development and lifelong learning.

Assessment

1. Advisory Board consultation
2. Evaluation by accrediting organization (AVMA)
3. Exit examination
4. Survey of employers
5. Survey of graduates
6. Graduate performance on the Veterinary Technician National Exam

Academic Progress Statement

Once admitted to the program, students must demonstrate adequate academic progress by earning a grade of "C" or better in all required VET courses.

Any required VET course in which a grade less than "C" is earned must be repeated with a grade of "C" or better prior to advancing in the program.

Dismissal from the program:

A student will be dismissed from the program for any of the following situations:

1. Earning a grade less than "C" or withdrawing while failing from the same required VET course more than once;
2. Earning a a grade less than "C" or withdrawing while failing from two different required VET courses;
3. Inability to complete the program within four academic years of beginning the program.
4. Students that are dismissed from the program twice are not eligible for reapplication.

Reinstatement to the program:

Once dismissed from the program, a student must reapply to the program and be readmitted. Readmitted students must complete all courses in the VET sequence as if starting for the first time.

Reinstatement into the program is not automatic. Reapplicants must demonstrate both the aptitude and motivation to succeed in the program. Those seeking reinstatement to the VET course sequence must do the following:

By May 30:

1. Submit transcripts of college courses at the end of the current semester (unofficial copy of transcripts is acceptable).
2. Provide the name and address of the veterinary facility where obtaining additional work experience. Include the dates and hours per week.
3. Submit a letter explaining what will be done differently to succeed in the VT program if reinstated. This should include plans for study, time management, etc.

By July 15:

1. Submit a letter describing in detail work experience during the past 12 months and explaining why you wish to become a credentialed veterinary technician.
2. Complete any ACWC requirements that are not current (e.g., rabies vaccinations).

Re-applicants will be required to complete an interview process once the above documents are received and reviewed. Failure to meet the above deadlines will cancel the reapplication process. Readmission will be granted only if the above criteria are met to the satisfaction of the VT faculty and there are class seats available.

Reapplicants will be notified by August 1st whether their petition for readmission has been granted.

Program Requirements

General Education

Refer to the Associate Degree General Education section (p. 29) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

General Education Courses	(See GNED Course Listings)	18
MATH 131 or higher	MATH General Education	3
		Subtotal: 21

Associate Requirements

AGR 133	Introduction to Animal Science	3
AGR 143	Anatomy and Physiology of Livestock	3
BIOL 105	Biology for Your Life	3
CHEM 101 or 111	(choose one)	4
MATH 131 or higher	MATH General Education	3
VET 108	Veterinary Clinical Anatomy	3
VET 112	Animal Care Techniques I	4
VET 213	Animal Care Techniques II	4
VET 218	Introduction to Veterinary Laboratory Techniques	4
VET 219	Surgical Nursing	3
VET 245	Veterinary Physiology and Pharmacology	4
VET 246	Anesthesia and Analgesia	2
VET 257	Concepts of Large Animal Diseases I	2
VET 258	Small Animal Medicine and Surgery I	2
VET 259	Veterinary Clinical Pathology I	2
VET 260	Veterinary Diagnostic Imaging	2
VET 261	Large Animal Clinics I	1
VET 262	Small Animal Clinics I	1
VET 264	Veterinary Clinical Pathology Clinics I	1
VET 265	Veterinary Diagnostic Imaging Clinics I	1
VET 301	Emergency and Critical Care	2
VET 357	Concepts of Large Animal Diseases II	2
VET 358	Small Animal Medicine and Surgery II	2
VET 359	Veterinary Clinical Pathology II	2
VET 363	Veterinary Preceptorship	1
VET 364	Veterinary Clinical Pathology Clinics II	1
VET 365	Veterinary Dentistry Clinics	1
VET 366	Veterinary Dentistry	2
VET 367	Large Animal Clinics II	1
VET 368	Small Animal Clinics II	1
VET 399C	Veterinary Technician Seminar	1
		Subtotal: 68

Total Credit Hours: 86

Veterinary Technology Area – Bachelor of Science

Students (including transfer) entering the Bachelor of Science in veterinary technology program must have completed a degree from an AVMA accredited veterinary technology program. Those students that have completed the AAS in veterinary technology from Morehead State University may be able to complete the VT-BS degree in two additional semesters with careful planning and counsel from their advisor.

Veterinary Technology Student Handbook

The Veterinary Technology Program Student Handbook is a supplement to the Morehead State University Undergraduate Catalog. The student handbook contains policies and guidelines related specifically to Morehead State University's Veterinary Technology Program. The handbook is reviewed and revised annually.

It is the student's responsibility to read the University Undergraduate Catalog, the Veterinary Technology Program Student Handbook, and the official notices. It is the student's responsibility to abide by the regulations of the University and the guidelines and policies set forth in the Veterinary Technology Program Student Handbook. Violations of policies within the student handbook may result in dismissal from the program.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 131 or higher	MATH General Education	3
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

AGR 133	Introduction to Animal Science	3
AGR 143	Anatomy and Physiology of Livestock	3
CHEM 101 or 111	Chemistry Elective	4
VET 108	Veterinary Clinical Anatomy	3
VET 112	Animal Care Techniques I	4
VET 213	Animal Care Techniques II	4
VET 218	Introduction to Veterinary Laboratory Techniques	4
VET 219	Surgical Nursing	3
VET 245	Veterinary Physiology and Pharmacology	4
VET 246	Anesthesia and Analgesia	2
VET 257	Concepts of Large Animal Diseases I	2
VET 258	Small Animal Medicine and Surgery I	2
VET 259	Veterinary Clinical Pathology I	2
VET 260	Veterinary Diagnostic Imaging	2
VET 261	Large Animal Clinics I	1
VET 262	Small Animal Clinics I	1
VET 264	Veterinary Clinical Pathology Clinics I	1
VET 265	Veterinary Diagnostic Imaging Clinics I	1
VET 301	Emergency and Critical Care	2
VET 357	Concepts of Large Animal Diseases II	2
VET 358	Small Animal Medicine and Surgery II	2
VET 359	Veterinary Clinical Pathology II	2
VET 363	Veterinary Preceptorship	1
VET 364	Veterinary Clinical Pathology Clinics II	1
VET 365	Veterinary Dentistry Clinics	1
VET 366	Veterinary Dentistry	2
VET 367	Large Animal Clinics II	1
VET 368	Small Animal Clinics II	1
VET 399C	Veterinary Technician Seminar	1
VET 401	Veterinary Practice Management	3
VET 402	Veterinary Clinical Assistantship	1
VET 403	Advanced Veterinary Clinical Practicum	12
VET 405	Veterinary Professional Leadership	3
VET 499C	Veterinary Technician Seminar	3
BIOL, AGR, or VET	300-level or above electives	6
		Subtotal: 90

Total Credit Hours: 120

Pre-Forestry

Students interested in forestry may take their first two years of course work at MSU and then complete their studies at accredited schools of forestry. If at the end of two years a student does not secure admission to an accredited school of forestry, most of the credits earned may be applied

toward a degree at MSU. The program may be modified to meet entrance requirements at any institution offering a forestry program.

Required Course Sequence

First Semester		
BIOL 150	Introduction Plant Science	3
CHEM 101	Survey of Chemistry	4
ENG 100	Writing I	3
MATH 175	Calculus I	4
PHED	activity course	1
General elective		2
		Subtotal: 17
Second Semester		
AGR 180	Introduction to Field Crops	3
CHEM 201	Survey of Organic Chemistry	4
ENG 200	Writing II	3
MATH 353	Statistics	3
PHED	activity course	1
General elective		2
		Subtotal: 16
Third Semester		
AGR 307	Soils	4
BIOL 215	General Botany	4
ECC 310	Principles of Surveying	3
PHYS 201	Elementary Physics I	4
SOC	elective	3
		Subtotal: 17

ECC 310: Prerequisite required

Fourth Semester		
COMS 108	Fundamentals of Speech Communication	3
ECON 201	Principles of Macroeconomics	3
ENG	Literature elective	3
HST 261	American History since 1865	3
PSY 154	Introduction to Psychology	3
		Subtotal: 15

Total Credit Hours: 62

Biology and Chemistry Department

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103 Lappin Hall
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Biology and Chemistry Faculty
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The Department of Biology and Chemistry offers Bachelor of Science degrees in biology, biomedical sciences and chemistry. The Bachelor of Science in Biological Sciences has three tracks that meet diverse career aspirations of students: 1) biology and 2) biology teaching (MSUTeach), and 3) biology 4+1 program. The Bachelor of Science in Biomedical Science has two tracks and is designed for students focused on pursuing professional health careers: 1) biomedical science, and 2) biomedical science 4+1 program. Both the Biological Sciences and Biomedical Sciences programs offer pre-programs in pre-chiropractic, pre-dentistry, pre-medical technology, pre-medicine, pre-pharmacy, pre-physician assistant, pre-physical therapy, and pre-podiatry.

The Bachelor of Science in Chemistry has three tracks that meet different career aspirations of students: 1) biomedical chemistry, 2) professional chemist, and 3) chemistry teaching (MSUTeach). Chemistry students interested in pursuing health-related careers, such as pre-pharmacy, pre-medicine, and pre-optometry should pursue the Biomedical Chemistry track of the area in chemistry. Chemistry also offers a major in general chemistry.

The biology, biomedical sciences and chemistry programs are designed to provide a strong foundation for the development of professionals in the specific areas outlined. The student must work closely with his/her advisor to ensure that proper course sequences are followed. The Department of Biology and Chemistry also offers minors in both biology and chemistry.

Biology

Biological Sciences Area (Biology Track) – Bachelor of Science

The Biological Sciences Area is deep and diverse, enabling students to pursue careers such as a professional biologist, teacher, health professional or environmental scientist. In addition to these career paths, students may find it advantageous to combine their biology study with other disciplines allowing them to pursue careers in law, public policy, and other areas that intersect with the field.

Program Competencies

Students graduating with the Bachelor of Science degree in Biology should possess the following:

1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is contemporary in the biological sciences.
2. An awareness of the basic concepts of the physical and biological sciences and how these concepts are applicable in the profession.
3. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences as well as the biological and physical sciences to the human community.
4. A basic understanding of literacy of all disciplines of biology, from molecular to cellular to organismal to population levels that unite organismal, continuity, diversity and unity of life.
5. A general competency in basic inorganic and organic chemistry as well as in introductory physics, mathematics and statistics.

Assessment

1. Departmental exit examination scores administered in the capstone course.
2. Laboratory skills performance assessments administered in selected program core biology courses.
3. Performance of graduates on entrance examinations to post-baccalaureate programs (GRE, MCAT, PCAT, DAT).
4. Employer feedback.
5. Graduate feedback.

Program Requirements

General Education		
General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements

that are also general education requirements will count in both places (as applicable).

Area Requirements

Biological Sciences Core Requirements:

BIOL 171	Principles of Biology	4
BIOL 210	General Zoology	4
BIOL 215	General Botany	4
BIOL 301	Fundamentals of Biochemistry	4
BIOL 304	Genetics	3
BIOL 461	Ecology	3
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 326	Organic Chemistry I	4
BIOL 499D	Principles of Evolution	3
		Subtotal: 37

Choose one of the following:

MATH 152 and MATH 141	(take six hours)	6
MATH 174	Pre-Calculus Mathematics	3
MATH 175	Calculus I	4
		Subtotal: 3-6

Choose one of the following:

BIOL 317	Principles of Microbiology	4
BIOL 380	Cell Biology	3
		Subtotal: 3-4

Choose one of the following:

PHYS 201	Elementary Physics I	4
PHYS 231	Engineering Physics I	5
		Subtotal: 4-5

Choose one of the following:

PHYS 202	Elementary Physics II	4
PHYS 232	Engineering Physics II	5
CHEM 327	Organic Chemistry II	4
ESS 108	Physical Geology	4
		Subtotal: 4-5

Choose one of the following

MATH 353	Statistics	3
MATH 365	Introduction to Mathematical Statistics	3
		Subtotal: 3

Biology Track Requirements

Choose five Advanced Biological Sciences Program Electives from the following:

BIOL 317	Principles of Microbiology	4
BIOL 318	Local Flora	3
BIOL 334	Entomology	3
BIOL 337	Comparative Anatomy	3
BIOL 338	Developmental Biology	4
BIOL 356	Conservation Biology	3
BIOL 357	Environmental Testing Methods	3
BIOL 380	Cell Biology	3
BIOL 384	Pathologic Basis of Disease	3
BIOL 385	Neurobiology	3
BIOL 407	Invertebrate Zoology	3
BIOL 409	Limnology	3
BIOL 421	Biology of Ferns	3
BIOL 422	Forests and Tree Ring Science	3
BIOL 424	Immunology	3
BIOL 425	Animal Physiology	3
BIOL 426	Plant Physiology	3
BIOL 427	Pathogenic Microbiology	3
BIOL 428	Virology	3
BIOL 429	Histology	3
BIOL 431	Herpetology	3
BIOL 433	Ichthyology	4
BIOL 437	Ornithology	3
BIOL 438	Mammalogy	3
BIOL 443	General Parasitology	3
BIOL 446	Biotechnology	3
BIOL 447	Organ Systems Physiology	3
BIOL 449	Plant Anatomy	3
BIOL 451	Advanced Cell Biology	3
BIOL 452	Aquatic Entomology	3
BIOL 456	Plant Morphology	3
BIOL 473	Medical-Veterinary Entomology	4
BIOL 478	Animal Behavior	3
BIOL 480	History of Science	3
BIOL 490	Advanced Biochemistry	3
		Subtotal: 15-20

Note: BIOL 317 and BIOL 380 cannot count as both Biology track electives and other required program hours.

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Biological Sciences Area (Environmental Science Track) – Bachelor of Science

Program Competencies

Students graduating with the Bachelor of Science degree in Biology should possess the following:

1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is contemporary in the biological sciences.
2. An awareness of the basic concepts of the physical and biological sciences and how these concepts are applicable in the profession.
3. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences as well as the biological and physical sciences to the human community.
4. A basic understanding of literacy of all disciplines of biology, from molecular to cellular to organismal to population levels that unite organismal, continuity, diversity and unity of life.
5. A general competency in basic inorganic and organic chemistry as well as in introductory physics, mathematics and statistics.

Assessment

1. Departmental exit examination scores administered in the capstone course.
2. Laboratory skills performance assessments administered in selected program core biology courses.
3. Performance of graduates on entrance examinations to post-baccalaureate programs (GRE, MCAT, PCAT, DAT).
4. Employer feedback.
5. Graduate feedback.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements

that are also general education requirements will count in both places (as applicable).

Area Requirements

Biological Sciences Core Requirements:

BIOL 171	Principles of Biology	4
BIOL 210	General Zoology	4
BIOL 215	General Botany	4
BIOL 301	Fundamentals of Biochemistry	4
BIOL 304	Genetics	3
BIOL 461	Ecology	3
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 326	Organic Chemistry I	4
BIOL 499D	Principles of Evolution	3
		Subtotal: 37

Choose one of the following:

MATH 152 and MATH 141	(take six hours)	6
MATH 174	Pre-Calculus Mathematics	3
MATH 175	Calculus I	4
		Subtotal: 3-6

Environmental Science Track Requirements

BIOL 356	Conservation Biology	3
BIOL 357	Environmental Testing Methods	3
BIOL 476	Special Problems	1-6
		Subtotal: 9

Choose one of the following:

PHYS 201	Elementary Physics I	4
PHYS 231	Engineering Physics I	5
ESS 108	Physical Geology	4
		Subtotal: 4-5

Choose one of the following:

PHYS 202	Elementary Physics II	4
PHYS 232	Engineering Physics II	5
ESS 201	Historical Geology	3
		Subtotal: 4-5

Choose 10 hours from the following:

BIOL 244	Human Anatomy and Physiology I	4
BIOL 245	Human Anatomy and Physiology II	4
BIOL 313	Economic Botany	3
BIOL 317	Principles of Microbiology	4
BIOL 318	Local Flora	3
BIOL 334	Entomology	3
BIOL 337	Comparative Anatomy	3
BIOL 338	Developmental Biology	4
BIOL 351	Plant Natural History	3
BIOL 352	Animal Natural History	3
BIOL 380	Cell Biology	3
BIOL 385	Neurobiology	3
BIOL 407	Invertebrate Zoology	3
BIOL 409	Limnology	3
BIOL 421	Biology of Ferns	3
BIOL 422	Forests and Tree Ring Science	3
BIOL 424	Immunology	3
BIOL 425	Animal Physiology	3
BIOL 426	Plant Physiology	3
BIOL 427	Pathogenic Microbiology	3
BIOL 428	Virology	3
BIOL 429	Histology	3
BIOL 431	Herpetology	3
BIOL 433	Ichthyology	4
BIOL 437	Ornithology	3
BIOL 438	Mammalogy	3
BIOL 443	General Parasitology	3
BIOL 446	Biotechnology	3
BIOL 452	Aquatic Entomology	3
BIOL 454	Environmental Education	3
BIOL 456	Plant Morphology	3
BIOL 473	Medical-Veterinary Entomology	4
BIOL 478	Animal Behavior	3
BIOL 490	Advanced Biochemistry	3
		Subtotal: 10

Environmental Science Support Electives

Choose 10 hours from the following:

AGR 307	Soils	4
AGR 311	Soil Conservation	3
AGR 412	Conservation Workshop	3
CHEM 327	Organic Chemistry II	4
CHEM 328	Organic Chemistry III	4
CHEM 360	Analytical Chemistry	3
CHEM 460	Instrumental Analysis	5
ECC 307	Hydrology	3
ECON 315	Resource Economics	3
ECON 401	Environmental Economics	3
ENG 370	Animals in Literature	3
ESS 276	Geologic Field Methods and Ground Truthing	3
ESS 315	Sedimentation and Stratigraphy	4
ESS 330	Geographic Information Systems (GIS) I	3
ESS 331	Geographic Information Systems (GIS) II	3
ESS 340	Oceans and Atmospheres	3
ESS 350	Geomorphology	3
ESS 362	Mineralogy	4
ESS 363	Petrology	4
ESS 381	Economic and Energy Geology	4
ESS 390	Environmental and Hydrogeology	4
ESS 401	Remote Sensing	3
ESS 410	Geological History of Plants and Animals	3
ESS 413	Micropaleontology	3
ESS 440	Biogeochemical Cycles	3
ETM 300	Technology and Society	3
ETM 352	Energy Systems	3
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 315	Functions and Modeling	3
MATH 353	Statistics	3
MATH 363	Differential Equations	3
MATH 453	Concepts in the Design of Experiments	3
MATH 455	Linear Statistical Models	3
MATH 456	Nonparametric Statistics	3
MATH 463	Partial Differential Equations	3
MATH 481	Mathematics for Scientists and Engineers	3
PHIL 333	Animal and Environmental Ethics	3
PHYS 232	Engineering Physics II	5
PHYS 350	Nuclear Science	4
PHYS 381	Computer Solutions to Engineering and Science Problems	3
PHYS 411	Thermodynamics	3
PHYS 412	Light and Physical Optics	3
PHYS 452	Nuclear Physics	3
POLS 324	Environmental Law and Policy	3
POLS 351	Public Administration	3
POLS 352	American Public Policy	3
POLS 451	Seminar in Bureaucracy and Public Management	3
SOC 465	Environmental Sociology	3
CRIM 465	Environmental Sociology	3
		Subtotal: 10

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Biological Sciences Area (MSUTeach Track) – Bachelor of Science

A description of MSUTeach and specific coursework for the MSUTeach Biology Track can be found in the MSUTeach Program (p. 129) section of the College of Science.

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

Students graduating with the Bachelor of Science degree in Biology should possess the following:

1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is contemporary in the biological sciences.
2. An awareness of the basic concepts of the physical and biological sciences and how these concepts are applicable in the profession.
3. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences as well as the biological and physical sciences to the human community.
4. A basic understanding of literacy of all disciplines of biology, from molecular to cellular to organismal to population levels that unite organismal, continuity, diversity and unity of life.
5. A general competency in basic inorganic and organic chemistry as well as in introductory physics, mathematics and statistics.

Assessment

1. Department exit examination scores administered in the capstone course.
2. Laboratory skills performance assessments administered in selected program core biology courses.
3. Performance of graduates on entrance examinations to post-baccalaureate programs (GRE, MCAT, PCAT, DAT).
4. Praxis II, Biology Content Knowledge, examination scores.
5. Employer feedback.
6. Graduate feedback.
7. Core Academic Skills for Educators (CASE) Testing Series and/or ACT for TEP admission.
8. Praxis II, Principles of Learning and Teaching: Grades 7-12 examination scores.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Biological Sciences Core Requirements:

BIOL 171	Principles of Biology	4
BIOL 210	General Zoology	4
BIOL 215	General Botany	4
BIOL 301	Fundamentals of Biochemistry	4
BIOL 304	Genetics	3
BIOL 461	Ecology	3
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 326	Organic Chemistry I	4
BIOL 499D	Principles of Evolution	3
		Subtotal: 37

Choose one of the following:

MATH 152 and MATH 141	(take six hours)	6
MATH 174	Pre-Calculus Mathematics	3
MATH 175	Calculus I	4
		Subtotal: 3-6

Choose one of the following:

BIOL 317	Principles of Microbiology	4
BIOL 380	Cell Biology	3
		Subtotal: 3-4

Choose one of the following:

PHYS 201	Elementary Physics I	4
PHYS 231	Engineering Physics I	5
		Subtotal: 4-5

Choose one of the following:

PHYS 202	Elementary Physics II	4
PHYS 232	Engineering Physics II	5
CHEM 327	Organic Chemistry II	4
ESS 108	Physical Geology	4
		Subtotal: 4-5

Choose one of the following

MATH 353	Statistics	3
MATH 365	Introduction to Mathematical Statistics	3
		Subtotal: 3

MSUTeach Track Requirements

BIOL 155	Environmental Biology	3
UTCH 100	Step 1: Inquiry Approaches to Teaching	1
UTCH 150	Step 2: Inquiry-Based Lesson Design	1
UTCH 200	Knowing and Learning in Mathematics and Science	3
UTCH 250	Perspectives on Science and Mathematics	3
UTCH 300	Classroom Interactions*	3
UTCH 360	Research Methods	3
UTCH 410	Project-Based Instruction*	3
UTCH 450	Apprentice Teaching	12
		Subtotal: 32

Note: Enrollment in UTCH 450 requires admission into the Teacher Education Program (TEP).

Choose two of the following:

BIOL 317	Principles of Microbiology	4
BIOL 318	Local Flora	3
BIOL 334	Entomology	3
BIOL 337	Comparative Anatomy	3
BIOL 338	Developmental Biology	4
BIOL 356	Conservation Biology	3
BIOL 357	Environmental Testing Methods	3
BIOL 380	Cell Biology	3
BIOL 384	Pathologic Basis of Disease	3
BIOL 385	Neurobiology	3
BIOL 407	Invertebrate Zoology	3
BIOL 409	Limnology	3
BIOL 421	Biology of Ferns	3
BIOL 422	Forests and Tree Ring Science	3
BIOL 424	Immunology	3
BIOL 425	Animal Physiology	3
BIOL 426	Plant Physiology	3
BIOL 427	Pathogenic Microbiology	3
BIOL 428	Virology	3
BIOL 429	Histology	3
BIOL 431	Herpetology	3
BIOL 433	Ichthyology	4
BIOL 437	Ornithology	3
BIOL 438	Mammalogy	3
BIOL 443	General Parasitology	3
BIOL 446	Biotechnology	3
BIOL 447	Organ Systems Physiology	3
BIOL 449	Plant Anatomy	3
BIOL 451	Advanced Cell Biology	3
BIOL 452	Aquatic Entomology	3
BIOL 456	Plant Morphology	3
BIOL 473	Medical-Veterinary Entomology	4
BIOL 478	Animal Behavior	3
BIOL 480	History of Science	3
BIOL 490	Advanced Biochemistry	3
		Subtotal: 6-8

Note: BIOL 317 and BIOL 380 cannot count as both Biology track electives and other required program hours.

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Biological Sciences Area (4+1 Track) – Bachelor of Science

A Morehead State University undergraduate student who has completed 80 or more credit hours toward the completion of the baccalaureate degree in Biological Sciences may be considered for admission into the Biology 4+1 Program. To be considered for admission, the student must apply no later than the second semester of their junior year. To be eligible for admission, the student must have a cumulative undergraduate GPA of at least 3.25 and a minimum earned grade of "B" in all 300- and 400-level biology (BIOL) courses completed at the time of admission. Students may earn a maximum of 12 graduate credit hours while holding undergraduate concurrent admission status.

The student must maintain a cumulative undergraduate GPA of at least 3.25 and a graduate GPA of at least 3.0 to continue in the Biology 4+1 Program. If the student drops below the minimum GPA, he or she will not be allowed to continue in the graduate component of the program; however, courses taken for graduate credit and completed with a passing grade will still count towards meeting the student's B.S. in Biological Sciences degree requirements.

For additional information, contact the Graduate School.

Program Competencies

Students graduating with the Bachelor of Science degree in Biology should possess the following:

1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is contemporary in the biological sciences.
2. An awareness of the basic concepts of the physical and biological sciences and how these concepts are applicable in the profession.
3. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences as well as the biological and physical sciences to the human community.
4. A basic understanding of literacy of all disciplines of biology, from molecular to cellular to organismal to population levels that unite organismal, continuity, diversity and unity of life.
5. A general competency in basic inorganic and organic chemistry as well as in introductory physics, mathematics and statistics.

Assessment

1. Departmental exit examination scores administered in the capstone course.

2. Laboratory skills performance assessments administered in selected program core biology courses.
3. Performance of graduates on entrance examinations to post-baccalaureate programs (GRE, MCAT, PCAT, DAT).
4. Employer feedback.
5. Graduate feedback.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Biological Sciences Core Requirements

BIOL 171	Principles of Biology	4
BIOL 210	General Zoology	4
BIOL 215	General Botany	4
BIOL 301	Fundamentals of Biochemistry	4
BIOL 304	Genetics	3
BIOL 461	Ecology	3
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 326	Organic Chemistry I	4
BIOL 499D	Principles of Evolution	3
		Subtotal: 37

Choose one of the following:

MATH 152 and MATH 141	(take six hours)	6
MATH 174	Pre-Calculus Mathematics	3
MATH 175	Calculus I	4
		Subtotal: 3-6

Choose one of the following:

BIOL 317	Principles of Microbiology	4
BIOL 380	Cell Biology	3
		Subtotal: 3-4

Choose one of the following:

PHYS 201	Elementary Physics I	4
PHYS 231	Engineering Physics I	5
		Subtotal: 4-5

Choose one of the following:

PHYS 202	Elementary Physics II	4
PHYS 232	Engineering Physics II	5
CHEM 327	Organic Chemistry II	4
ESS 108	Physical Geology	4
		Subtotal: 4-5

Choose one of the following:

MATH 353	Statistics	3
MATH 365	Introduction to Mathematical Statistics	3
		Subtotal: 3

Biology 4+1 Track Requirements

Choose three graduate biology electives from the following:

BIOL 607	Invertebrate Zoology	3
BIOL 609	Limnology	3
BIOL 610	Advanced Evolution	3
BIOL 621	Biology of Ferns	3
BIOL 624	Immunology	3
BIOL 627	Pathogenic Microbiology	3
BIOL 628	Virology	3
BIOL 629	Histology	3
BIOL 631	Herpetology	3
BIOL 633	Ichthyology	4
BIOL 637	Ornithology	3
BIOL 638	Mammalogy	3
BIOL 643	General Parasitology	3
BIOL 646	Biotechnology	3
BIOL 647	Organ Systems Physiology	3
BIOL 649	Plant Anatomy	3
BIOL 651	Advanced Cell Biology	3
BIOL 652	Aquatic Entomology	3
BIOL 656	Plant Morphology	3
BIOL 673	Medical-Veterinary Entomology	4
BIOL 678	Animal Behavior	3
BIOL 680	History of Science	3
BIOL 690	Advanced Biochemistry	3
		Subtotal: 9-12

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Biomedical Sciences Area – Bachelor of Science

The biomedical sciences area is designed for students that want to focus their studies in disciplines of biology related to health and medicine. These include, but are not limited to, cell biology, physiology, biochemistry, molecular biology, microbiology and genetics. The core of this degree provides a strong foundation for the student, and the electives facilitate breadth in the biomedical areas of interest. Because of the flexibility of the program, it is recommended for students considering careers in the health professions, students wanting to pursue graduate studies in one of the biomedical sciences or students wanting to directly enter the workforce in one of the biomedical sciences.

Program Competencies

Students graduating with the Bachelor of Science degree in Biomedical Sciences should possess the following:

1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is both qualitative and quantitative.
2. A general competency in the physical sciences, including basic inorganic and organic chemistry, as well as in introductory physics, mathematics and statistics.
3. An understanding of literacy of the disciplines of biology related to biomedicine, including cell biology, physiology, biochemistry, molecular biology, microbiology and genetics.
4. An understanding of the interdisciplinary nature of biomedical sciences and science in general.
5. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences, biological sciences and physical sciences to the human community.

Assessment

1. Departmental exit examination scores administered in the capstone course.
2. Laboratory skills performance assessments administered in selected program core biology courses.
3. Performance of graduates on entrance examinations to post-baccalaureate programs (GRE, MCAT, PCAT, DAT).
4. Employer feedback.
5. Graduate feedback.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Biomedical Requirements

BIOL 171	Principles of Biology	4
BIOL 244	Human Anatomy and Physiology I	4
BIOL 245	Human Anatomy and Physiology II	4
BIOL 301	Fundamentals of Biochemistry	4
BIOL 304	Genetics	3
BIOL 317	Principles of Microbiology	4
BIOL 380	Cell Biology	3
BIOL 499E	Current Issues in Biomedical Sciences	3
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 326	Organic Chemistry I	4
		Subtotal: 41

Choose one of the following:

MATH 152 and MATH 141	(take six hours)	6
MATH 174	Pre-Calculus Mathematics	3
MATH 175	Calculus I	4
		Subtotal: 3-6

Choose one of the following:

PHYS 201	Elementary Physics I	4
PHYS 231	Engineering Physics I	5
		Subtotal: 4-5

Choose one of the following:

PHYS 202	Elementary Physics II	4
PHYS 232	Engineering Physics II	5
		Subtotal: 4-5

Choose one of the following:

MATH 353	Statistics	3
MATH 365	Introduction to Mathematical Statistics	3
		Subtotal: 3

Biomedical Electives

Choose 18 hours from the following:

BIOL 199	Selected Workshop Topics	1-4
BIOL 337	Comparative Anatomy	3
BIOL 338	Developmental Biology	4
BIOL 384	Pathologic Basis of Disease	3
BIOL 385	Neurobiology	3
BIOL 399	Selected Workshop Topics	1-4
BIOL 424	Immunology	3
BIOL 425	Animal Physiology	3
BIOL 427	Pathogenic Microbiology	3
BIOL 428	Virology	3
BIOL 429	Histology	3
BIOL 443	General Parasitology	3
BIOL 444	Clinical Laboratory Procedures	3
BIOL 446	Biotechnology	3
BIOL 447	Organ Systems Physiology	3
BIOL 451	Advanced Cell Biology	3
BIOL 473	Medical-Veterinary Entomology	4
BIOL 476	Special Problems	1-6
BIOL 490	Advanced Biochemistry	3
BIOL 493	Laboratory Techniques in Biochemistry	2
BIOL 499D	Principles of Evolution	3
CHEM 327	Organic Chemistry II	4
		Subtotal: 18

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Biomedical Sciences Area (4+1 Track) – Bachelor of Science

A Morehead State University undergraduate student who has completed 80 or more credit hours toward the completion of the baccalaureate degree in Biomedical Sciences may be considered for admission into the Biology 4+1 Program. To be considered for admission, the student must apply no later than the second semester of their junior year. To be eligible for admission, the student must have a cumulative undergraduate GPA of at least 3.25 and a minimum earned grade of "B" in all 300- and 400-level biology (BIOL) courses completed at the time of admission. Students may earn a maximum of 12 graduate credit hours while holding undergraduate concurrent admission status.

The student must maintain a cumulative undergraduate GPA of at least 3.25 and a graduate GPA of at least 3.0 to continue in the Biology 4+1 Program. If the student drops below the minimum GPA, he or she will not be allowed to continue in the graduate component of the program; however, courses taken for graduate credit and completed with a passing grade will still count towards meeting the student's B.S. in Biomedical Sciences degree requirements.

For additional information, contact the Graduate School.

Program Competencies

Students graduating with the Bachelor of Science degree in Biomedical Sciences should possess the following:

1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is both qualitative and quantitative.
2. A general competency in the physical sciences, including basic inorganic and organic chemistry, as well as in introductory physics, mathematics and statistics.
3. An understanding of literacy of the disciplines of biology related to biomedicine, including cell biology, physiology, biochemistry, molecular biology microbiology, and genetics.
4. An understanding of the interdisciplinary nature of biomedical sciences and science in general.
5. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences, biological sciences and physical sciences to the human community.

Assessment

1. Departmental exit examination scores administered in the capstone course.
2. Laboratory skills performance assessments administered in selected program core biology courses.
3. Performance of graduates on entrance examinations to post-baccalaureate programs (GRE, MCAT, PCAT, DAT).
4. Employer feedback.
5. Graduate feedback.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Biomedical Requirements

BIOL 171	Principles of Biology	4
BIOL 244	Human Anatomy and Physiology I	4
BIOL 245	Human Anatomy and Physiology II	4
BIOL 301	Fundamentals of Biochemistry	4
BIOL 304	Genetics	3
BIOL 317	Principles of Microbiology	4
BIOL 380	Cell Biology	3
BIOL 499E	Current Issues in Biomedical Sciences	3
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 326	Organic Chemistry I	4
		Subtotal: 41

Choose one of the following:

MATH 152 and MATH 141	(take six hours)	6
MATH 174	Pre-Calculus Mathematics	3
MATH 175	Calculus I	4
		Subtotal: 3-6

Choose one of the following:

PHYS 201	Elementary Physics I	4
PHYS 231	Engineering Physics I	5
		Subtotal: 4-5

Choose one of the following:

PHYS 202	Elementary Physics II	4
PHYS 232	Engineering Physics II	5
		Subtotal: 4-5

Choose one of the following:

MATH 353	Statistics	3
MATH 365	Introduction to Mathematical Statistics	3
		Subtotal: 3

Biomedical 4+1 Track Requirements

Choose 18 hours from the following approved electives, including three 600-level graduate courses:

BIOL 199	Selected Workshop Topics	1-4
BIOL 337	Comparative Anatomy	3
BIOL 338	Developmental Biology	4
BIOL 384	Pathologic Basis of Disease	3
BIOL 385	Neurobiology	3
BIOL 399	Selected Workshop Topics	1-4
BIOL 425	Animal Physiology	3
BIOL 444	Clinical Laboratory Procedures	3
BIOL 476	Special Problems	1-6
BIOL 493	Laboratory Techniques in Biochemistry	2
BIOL 499D	Principles of Evolution	3
CHEM 327	Organic Chemistry II	4
BIOL 424 or BIOL 624	Immunology	3
BIOL 427 or BIOL 627	Pathogenic Microbiology	3
BIOL 428 or BIOL 628	Virology	3
BIOL 429 or BIOL 629	Histology	3
BIOL 443 or BIOL 643	General Parasitology	3
BIOL 446 or BIOL 646	Biotechnology	3
BIOL 447 or BIOL 647	Organ Systems Physiology	4
BIOL 451 or BIOL 651	Advanced Cell Biology	3
BIOL 473 or BIOL 673	Medical-Veterinary Entomology	4
BIOL 490 or BIOL 690	Biochemistry	4
		Subtotal: 18

BIOL courses taken for undergraduate credit may not also be taken for Biology Graduate credit.

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Additional hours may be required depending on specific course choices.

Total Credit Hours: 120

Biology Minor

Biology Minor Requirements

Core Requirements

BIOL 171	Principles of Biology	4
BIOL 210	General Zoology	4
BIOL 215	General Botany	4
BIOL 304	Genetics	3
		Subtotal: 15

Electives

Three additional courses (minimum of nine hours). These courses must be selected from the list of BIOL courses. Core and elective accepted for the biology area (track 1).

Subtotal: 9

Supplemental Requirements

The student must take one of the following sequences:

Sequence I

CHEM 101	Survey of Chemistry	4
CHEM 201	Survey of Organic Chemistry	4

Sequence II

CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
		Subtotal: 8

Total Credit Hours: 32

Pre-Chiropractic

Advisor: M. Fultz

Admission requirements for schools and colleges of chiropractic medicine emphasize a strong background in science and the humanities. Pre-chiropractic students are encouraged to fulfill the requirements and complete their 90-credit hours with additional courses in the biological sciences. An emphasis on courses in the basic sciences, particularly biology, will prepare the student for success in chiropractic medicine.

Requirements

Most schools or colleges of chiropractic medicine require the following pre-professional education for admission to the Doctor of Chiropractic degree programs:

1. 90 credit hours leading to a baccalaureate degree in a college or university program with a minimum GPA of 2.5 on a 4.0 scale.
2. 6 credit hours of biology with laboratory.
3. 6 credit hours of general chemistry with laboratory.
4. 6 credit hours of organic chemistry with laboratory.
5. 6 credit hours of physics with laboratory.
6. 6 credit hours of English and/or communication skills.
7. 3 credit hours of psychology.
8. 15 credit hours of social sciences and/or humanities.
9. It is recommended that biology courses be selected from principles of biology, cell biology, general zoology or principles of microbiology.

For purposes of course scheduling and complete preparation for chiropractic schools, all pre-chiropractic students should work closely with their assigned advisor.

MSU has an articulation agreement with Logan College of Chiropractic and Palmer College of Chiropractic which allows students to enter professional school after three years and still be able to receive a BS degree from MSU.

Pre-Dentistry

Advisor: D. Peyton

Dental schools' selection of applicants is based on science GPA, overall grades, Dental Admission Scores (DAT) and demonstration of superior qualifications in personal maturity, academic competence and demonstrated motivation for pursuing a career in dentistry. The DAT and application process should be completed by the fall one year prior to desired entry into dental school. Preparation for the DAT requires completion of a suggested curriculum emphasizing the biological and physical sciences. Due to increasingly competitive applicant pools, it is strongly recommended that students be very near to completion of a bachelor's degree at the expected time of entry into dental school. Pre-dental students generally follow a curriculum designed for the area in biology (track 1). However, certain complementary and specific elective and general education courses are recommended. A more detailed suggested curriculum is available from the pre-dental advisor.

Pre-Medical Technology/Clinical Laboratory Science Program

Advisor: G. Gearner

The field of medical technology or clinical laboratory science involves the medical application of the basic sciences. Principles from cellular and molecular biology, organic and biochemistry, microbiology, immunology, genetics and physiology are applied to laboratory testing.

In the clinical laboratory, samples from the body are tested to determine the presence, absence, extent or cause of disease. The accurate performance of these complex tests requires advanced education in all areas of clinical laboratory sciences, including chemistry, toxicology, immunohematology, hematology, urinalysis and microbiology. Medical technology is an exciting career choice for people who like biology and chemistry, enjoy laboratory work and desire to help others.

The continued growth of the health care industry is accompanied by an increasing demand for clinical laboratory settings. Graduates acquire positions in research laboratories, medical industry and sales, forensic medicine, law enforcement, state health departments, veterinary laboratories, educational programs, physician offices and large clinical laboratories.

After several years of experience, medical technologists may choose to move up the career ladder into educational, supervisory and managerial roles. Others obtain advanced education in management, business or the computer sciences. Graduates of this program have excelled in all of these areas.

MSU is affiliated with the following accredited hospital schools of medical technology:

- St. Elizabeth Medical Center, Covington, KY
- Owensboro Mercy Health System, Owensboro, KY
- Bellarmine University, Louisville, KY

Students pursuing a Bachelor of Science, with the assistance of their medical technology advisor, usually begin to make applications to medical technology schools at the beginning of their senior year. Acceptance by an accredited school of medical technology for a clinical year of study is competitive and is generally based on the applicant's academic record (minimum of 2.8 GPA and a minimum science GPA of 2.5), personal interviews, and a letter of recommendation. The final decision for admittance into the program is made by the appropriate school of medical technology. MSU makes every effort to secure each student a position at one of the hospital-based schools of medical technology.

Affiliated hospitals charge tuition during the clinical year to help defray expenses incurred in providing the students laboratory experience. The hospitals provide the medical technology coordinator with an estimate of expenses, in addition to tuition or fees, the student will likely incur during the clinical training. Grants and/or loans may be available for eligible students.

Affiliated hospital schools do not assume any obligation to accept a maximum or minimum number of students each year from MSU. Selection is based on open competition.

Clinical Year

The following courses, equivalents or subject areas, must be satisfactorily completed (at least 2.0 GPA) during the hospital-based clinical year to receive credit: immunohematology, 58 hours of lecture and 106 hours of laboratory; medical microbiology, 80 hours of lecture and 180 hours of laboratory; medical mycology, 30 hours of lecture and 33 hours of laboratory; serology and immunology, 40 hours of lecture and 32 hours of laboratory; routine analysis, 40 hours of lecture and 150 hours of laboratory; clinical chemistry, 114 hours of lecture and 180 hours of laboratory; medical parasitology, 25 hours of lecture and 45 hours of laboratory; hematology, 99 hours of lecture and 180 hours of laboratory; medical technology seminar, 16 hours of lecture; and special topics, 91 hours of lecture and 33 hours of laboratory.

Certification Examination

Upon successful completion of the clinical year of training, students are eligible to take a certifying examination in medical technology, such as the American Society of Clinical Pathologist (ASCP), Board of Registry.

For the purpose of scheduling course selection and complete preparation for medical technology school, premedical technology students must work closely with their faculty advisors.

For more information on premedical technology, important links may be accessed from the website given at the beginning of this program description.

Pre-Pharmacy

Advisor: D. Eisenhour

The suggested program of pre-pharmacy study will meet the requirements for the University of Kentucky College of Pharmacy and most other pharmacy schools. To assure proper course selections and to meet all admission requirements, students must work closely with their faculty advisor. The 70 hours of required pre-pharmacy coursework of most

colleges of pharmacy can be completed in two years, although it usually takes three years because of the rigorous nature of the coursework. Four additional years are required at pharmacy school. Pre-pharmacy students in the department generally follow the initial curriculum designed with an emphasis in biology and chemistry. However, certain complementary and specific general education courses are recommended. The pre-pharmacy curriculum includes four semesters of biology, two semesters of general chemistry, two semesters of organic chemistry, two semesters of math, one semester of statistics, two semesters of English and one semester of economics. An academic handbook and suggested curriculum are available from the pre-pharmacy advisor.

Pre-Physical Therapy

Advisor: D. Peyton

Most schools of physical therapy require 60 to 70 hours of selected coursework in a pre-physical therapy program. Students who plan to enter the program in physical therapy should consult the catalog of the school they plan to attend to be certain they fulfill specific requirements.

The suggested pre-physical therapy curriculum at MSU will meet the requirements at most physical therapy schools. To assure proper course selection and to meet all admission requirements, students must work closely with their faculty advisor.

Pre-physical therapy students generally follow the curriculum designed for the biology major. However, certain complementary and specific general education courses are recommended.

Academic handbook and suggested curriculum are available from the pre-physical therapy advisor.

Pre-Physician Assistant

Advisors: D. DeMoss, K. Gibbs

The Pre-Physician Assistant Program at MSU prepares students for admission to the professional school component of the University of Kentucky Physician Assistant Studies Program, either in Lexington or at its satellite campus in Morehead. To satisfy admission prerequisites, the recommended pre-physician assistant curriculum at MSU consists of the completion of an area of concentration in biology. In addition, the student must also complete courses in: medical terminology, sociology, general psychology and developmental psychology.

MSU offers courses acceptable to meet all of the University of Kentucky prerequisite requirements. To assure proper course selection and to meet all admission requirements to the professional program, students must work closely with their assigned faculty advisor.

To gain admission into the postgraduate program, all students must have completed a bachelor's degree at an accredited institution including specific prerequisite courses. Selection of the applicants is based on cumulative GPA, GRE, personal interview, and recommendation. Because of an increasingly competitive applicant pool, it is strongly recommended that applicants obtain a bachelor's degree in one of the science fields. Completion of the two-and-a-half-year professional component in Physician Assistant School leads to a Master of Science in Physician Assistant Studies from the University of Kentucky.

Pre-Podiatric Medicine

Advisor: M. Fultz

Podiatric medicine is the branch of medical sciences devoted to the study of human movement with primary focus being the ankle and foot. The podiatric physician is a health professional who is involved with examination, prevention, diagnosis, and treatment of foot disorders by physical, medical, and surgical means. A podiatric physician makes independent judgments, utilizes x-rays and laboratory tests for diagnostic purposes, prescribes medications, orders physical therapy, sets fractures and performs surgery.

Admission to a college of podiatric medicine generally requires completion of a minimum of 90 semester hours of coursework at an accredited undergraduate institution. However, because of the competitive applicant pool, it is strongly recommended that students obtain a bachelor's degree prior to entering a college of podiatric medicine. All applicants must take the Medical College Admissions Test (MCAT) prior to admission to their podiatry school of choice. To assure proper course selection and to meet all admission requirements to the professional program, students should work closely with their faculty advisor.

A wide range of opportunities exist for the podiatric medical practitioner in today's healthcare system. Many communities are in critical need of the skills, techniques, and knowledge that a podiatrist can contribute to the team approach of providing comprehensive healthcare.

Pre-Medicine

Advisors: K.Gibbs, M. Fultz, J. Hare, M. Mefford, C. Tuerk

Admission requirements vary among medical schools, but all recognize the importance of a strong foundation in the natural sciences (biology, general and organic chemistry, mathematics and physics), highly developed communication and thinking skills, and a good background in the social sciences and humanities. Competencies in these areas should be developed before taking the required Medical College Admission Test (MCAT). Many pre-medical students elect to study an area of concentration in biology, but other options are acceptable and may be completed with the aid of the departmental premedical advisors. Certain complementary and specific general education courses are recommended for the premedical program of study. Students granted early admission to their medical school of choice may, upon completion of their medical degree, transfer selected medical school courses back to MSU for completion of their bachelor's degree in the sciences.

Since specific requirements do vary among medical schools, it is essential that the student investigate the requirements of the medical school(s) of his/her choice during the first year of the preparatory program.

For purposes of scheduling, course selection and complete preparation for medical school, the pre-medical student must work closely with the assigned faculty advisor.

Gulf Coast Research Laboratory

MSU maintains a formal affiliation arrangement with the Gulf Coast Research Laboratory (GCRL) in Ocean Springs, Miss. Through this arrangement, our students may take field courses in marine science at GCRL during the summer. Credits for these courses are awarded through the University of Southern Mississippi and will be accepted as transfer credit at Morehead State University. The following is a list of courses taught at GCRL, their level (undergraduate or graduate), and the semester credit hours. Not all courses are offered each year. Most courses have prerequisites of eight to 16 hours of biology.

Marine Science I: Oceanography (U)	5
Marine Science II: Marine Biology (U)	5
Marine Invertebrate Zoology (U/G)	6
Marine Ichthyology (U/G)	6
Marine Ecology (U/G)	5
Marine Aquaculture (U/G)	6
Marine Mammals (U/G)	5
Marine Botany (U/G)	3
Biotechnology in Marine Biology (U/G)	6
Coastal Ecology for Teachers (U/G)	4

Special Topic: Beach Fauna (U/G)	2
Special Topic: Cetacean Behavior and Cognition (U/G)	3
Special Topic: Fauna of Submerged Aquatic Vegetation (U/G)	2
Special Problems in Marine Science (U/G)	1-6
Special Topics in Marine Science (U/G)	1-6

Students may obtain more information about the Gulf Coast Research Laboratory and admission to the summer program by visiting https://gcrl.usm.edu/index.php or by writing:

Office of Student Services
Gulf Coast Research Laboratory
P.O. Box 7000
Ocean Springs, MS 39566-7000
Telephone 228-872-4200

Chemistry

A degree in chemistry opens a wide variety of careers to a graduate. Careers in chemistry involve such diverse areas as the development of new materials, energy, foods, environmental protection, chemical sales, and drug design. The chemistry degree is frequently used as a preparation for entrance into law, pharmacy, medical, dental, optometry and veterinary schools. The chemistry program has several tracks. Those seeking a job in the chemical industry or graduate school generally pursue the Chemistry Area – Professional Chemist track. The Chemistry Area – Biomedical Chemistry track is primarily used for students seeking admission to a professional school such as pharmacy, optometry or medical school. The Chemistry Area – MSU Teach track is solely intended to qualify the student for state certification for secondary school chemistry teaching. The Chemistry Major - General track is also used along with the appropriate minor for students seeking professional school or jobs in the private sector.

Program Competencies

The student will:

1. Develop enough learning techniques to adapt to new vocational and educational situations, i.e., be able to self-educate in new applied areas and keep up with progress in the field.
2. Develop enough self-confidence, personal independence and understanding of scientific methods to carry out a technical project on one's own with only consultant-style help.
3. Read technical literature with good comprehension.
4. Write technical reports in a clear and logical way.
5. Present oral reports on technical material in a clear and logical way.
6. Be able to retrieve any needed information from the scientific literature.
7. Analyze laboratory data for its correctness and locate probable sources of error, including an understanding of standard statistical tests and the concepts of error and uncertainty, and an understanding of the advantages and limitations of current instrumental and other laboratory techniques.
8. Be able to use the basic principles of chemistry as presented in the first-year class in a wide variety of contexts, especially the relationship of the microscopic physical model to bulk chemical behavior. Be able to relate scientific principles to observed behavior.
9. Comprehend the major systems of nomenclature used in chemistry and know enough about the basic functional groups of inorganic and organic chemistry to have a primitive vocabulary of basic types of chemical reactions and to be able to use this to make rational chemical predictions.

Assessment

1. Performance of graduates on entrance examinations
2. Performance of graduates in professional schools
3. Surveys of graduates
4. Surveys of employers
5. Exit Exam

Chemistry Area (Biomedical Track) – Bachelor of Science

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Chemistry Core Requirements

BIOL 171	Principles of Biology	4
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 301	Fundamentals of Biochemistry	4
CHEM 326	Organic Chemistry I	4
CHEM 327	Organic Chemistry II	4
CHEM 351	Bioinorganic Chemistry	3
CHEM 360	Analytical Chemistry	3
CHEM 441	Physical Chemistry I	3
MATH 175	Calculus I	4
		Subtotal: 37

Additional Area Requirements

Choose one of the following:

PHYS 201 and 202	Elementary Physics I and II	8
PHYS 231 and 232	Engineering Physics I and II	10
		Subtotal: 8-10

Choose one of the following:

CHEM 499C and 499D	Chemistry Senior Project I & II	3
CHEM 499E	Issues in Chemistry	3
		Subtotal: 3

Biomedical Chemistry Requirements

BIOL 304	Genetics	3
BIOL 380	Cell Biology	3
BIOL 244	Human Anatomy and Physiology I	4
		Subtotal: 10

Biomedical Chemistry Electives

Choose four courses from the following:

BIOL 245	Human Anatomy and Physiology II	4
BIOL 317	Principles of Microbiology	4
BIOL 336	Pathophysiology	4
BIOL 385	Neurobiology	3
BIOL 399	Selected Topics	3
BIOL 428	Virology	3
BIOL 429	Histology	3
BIOL 446	Biotechnology	3
BIOL 451	Advanced Cell Biology	3
BIOL 490	Advanced Biochemistry	3
CHEM 399	Selected Topics	3
CHEM 429	Pharmaceutical Chemistry	3
IMS 202	Medical Terminology	2
		Subtotal: 11-15

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Chemistry Area (Professional Chemist Track) – Bachelor of Science

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Chemistry Core Requirements

BIOL 171	Principles of Biology	4
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 301	Fundamentals of Biochemistry	4
CHEM 326	Organic Chemistry I	4
CHEM 327	Organic Chemistry II	4
CHEM 351	Bioinorganic Chemistry	3
CHEM 360	Analytical Chemistry	3
CHEM 441	Physical Chemistry I	3
MATH 175	Calculus I	4
		Subtotal: 37

Choose one of the following:

CHEM 499C and 499D	Chemistry Senior Project I & II	3
CHEM 499E	Issues in Chemistry	3
		Subtotal: 3

Professional Chemist Requirements

CHEM 340	Chemical Information	2
CHEM 442	Physical Chemistry II	5
CHEM 451	Advanced Inorganic Chemistry	3
CHEM 460	Instrumental Analysis	5
CHEM 476	Special Problems	1
MATH 275	Calculus II	4
		Subtotal: 20

Choose one course from the following:

MATH 276	Calculus III	4
MATH 363	Differential Equations	3
MATH 365	Introduction to Mathematical Statistics	3
		Subtotal: 3-4

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Chemistry Area (MSUTeach Track) – Bachelor of Science

A description of MSUTeach and specific coursework for the MSUTeach Chemistry Track can be found in the MSUTeach Program (p. 129) section of the College of Science.

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements

that are also general education requirements will count in both places (as applicable).

Area Requirements

Chemistry Core Requirements

BIOL 171	Principles of Biology	4
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 301	Fundamentals of Biochemistry	4
CHEM 326	Organic Chemistry I	4
CHEM 327	Organic Chemistry II	4
CHEM 351	Bioinorganic Chemistry	3
CHEM 360	Analytical Chemistry	3
CHEM 441	Physical Chemistry I	3
MATH 175	Calculus I	4
		Subtotal: 37

Additional Area Requirements

Choose one of the following:

PHYS 201 and 202	Elementary Physics I and II	8
PHYS 231 and 232	Engineering Physics I and II	10
		Subtotal: 8-10

Choose one of the following:

CHEM 499C and 499D	Chemistry Senior Project I & II	3
CHEM 499E	Issues in Chemistry	3
		Subtotal: 3

MSUTeach Chemistry Requirements

UTCH 100	Step 1: Inquiry Approaches to Teaching	1
UTCH 150	Step 2: Inquiry-Based Lesson Design	1
UTCH 200	Knowing and Learning in Mathematics and Science	3
UTCH 250	Perspectives on Science and Mathematics	3
UTCH 300	Classroom Interactions*	3
UTCH 315	Functions and Modeling	3
UTCH 360	Research Methods	3
UTCH 410	Project-Based Instruction*	3
UTCH 450	Apprentice Teaching	12
		Subtotal: 32

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Chemistry Major – Bachelor of Science

Chemistry Major Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

BIOL 171	Principles of Biology	4
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 326	Organic Chemistry I	4
CHEM 351	Bioinorganic Chemistry	3
CHEM 360	Analytical Chemistry	3
CHEM 441	Physical Chemistry I	3
		Subtotal: 25

Additional Major Requirements

Choose one of the following:

PHYS 201 and 202	Elementary Physics I and II	8
PHYS 231 and 232	Engineering Physics I and II	10
		Subtotal: 8-10

Choose one of the following:

CHEM 499C and 499D	Chemistry Senior Project I & II	3
CHEM 499E	Issues in Chemistry	3
		Subtotal: 3

CHEM Electives

CHEM	Electives above 300	8
		Subtotal: 8

Minor

All majors must also have a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Chemistry Minor

Students completing a Chemistry Major may not choose to complete a Chemistry Minor to fulfill degree requirements.

Chemistry Minor Requirements

Core Requirements

CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 326	Organic Chemistry I	4
CHEM 360	Analytical Chemistry	3
		Subtotal: 15

Electives

CHEM 301 or higher and/or BIOL 490	(choose six hours)	6
		Subtotal: 6

Total Credit Hours: 21

Pre-Pharmacy

Advisors: A. Macintosh, Mark Blankenbuehler, Nathan Coker

The suggested pre-pharmacy program with a chemistry major meets the requirements of most pharmacy schools; electives are tailored to meet the needs of individual students while providing excellent training in chemistry. A core of biology classes is also taken along with some business, social science, physics and math classes.

Pharmacy schools particularly encourage students holding degrees in chemistry and biology to apply for admission. Students may apply for admission to pharmacy school after three years, but a significant number of applicants spend four years at MSU and complete requirements for a BS degree. Specific courses in pharmacy school may be transferred back upon completion of pharmacy school to finish the chemistry degree at MSU. In making admissions decisions, pharmacy schools consider a student's academic record, standardized exam scores, communication skills, integrity, and maturity. Students in the Pre-Pharmacy program are encouraged to participate in activities to develop and demonstrate all of these characteristics. Pharmacy schools also strongly advise work

experience in a pharmacy. Specific courses may be required for admission to particular pharmacy schools, and pre-pharmacy students should carefully plan their course schedules with their chemistry advisors.

Pre-Medicine

Advisor: A. Macintosh

Medical schools also consider standardized exam scores, communication skills, integrity, maturity and community involvement. Students should pursue activities, which demonstrate these characteristics.

Most students finish their degrees at MSU before going to medical school, but students who gain early admission may transfer back specific courses upon completion of medical school to finish the MSU chemistry degree provided other graduation requirements have been met. Specific medical schools may have varying requirements and students should investigate their schools of choice early. Academic advisors work closely with students planning their sequence of courses for degrees.

The chemistry major for pre-medical students develops and strengthens communication and thinking skills and gives a good background in chemistry. Additional course work in physics and mathematics helps prepare students for medical school. Most pre-medical students who major in chemistry also minor in biology, though other minors are possible. Recommended general education classes in social and behavioral sciences and humanities round out the student's education.

Pre-Optometry

Advisor: M. Blankenbuehler

The suggested pre-optometry program with a chemistry degree meets the requirements of most optometry schools; electives are chosen to meet the individual needs of students while providing excellent training in chemistry. In addition to chemistry courses, students take a variety of courses in biology, physics, business, social sciences and math to prepare for optometry school. Optometry schools seek high academically achieving students but also those who score well on the Optometry Admission Test (OAT). Competitive applicants are also expected to have extensive volunteer, shadowing and/or work experiences in an optometry setting. Excellent recommendations from the optometrist for which they worked/shadowed as well as chemistry and biology faculty are also important for the admissions process. The vast majority of students complete a 4-year degree before entering optometry school.

Requirements

Core Courses

BIOL 171	Principles of Biology	4
BIOL 210	General Zoology	4
BIOL 317	Principles of Microbiology	4
BIOL 337	Comparative Anatomy	3
BIOL 425	Animal Physiology	3
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 301	Fundamentals of Biochemistry	4
CHEM 326	Organic Chemistry I	4
CHEM 327	Organic Chemistry II	4
ENG 100	Writing I	3
ENG 200	Writing II	3
MATH 175	Calculus I	4
MATH 353	Statistics	3
PHYS 201	Elementary Physics I	4
PHYS 202	Elementary Physics II	4
PSY 154	Introduction to Psychology	3
	Social Science electives	6
		Subtotal: 68

Additional recommended courses

BIOL 234	Principles of Human Anatomy and Physiology I	3
BIOL 235	Principles of Human Anatomy and Physiology II	3
BIOL 304	Genetics	3
BIOL 380	Cell Biology	3

Kinesiology, Health, and Imaging Sciences Department

Dr. Manuel Probst, Chair
210B Center for Health, Education and Research
Morehead, KY 40351
Phone: 606-783-2180 or 606-783-2646
kh@moreheadstate.edu (Kinesiology and Health)
is@moreheadstate.edu (Imaging Sciences)
https://moreheadstate.edu/academics/colleges/science/kinesiology-health-imaging-sciences/

The Department of Kinesiology, Health, and Imaging Sciences offers general education courses, a major in health promotion, areas in exercise science and health promotion, and a minor in health. An Associate of Applied Science is offered in respiratory care therapy and radiologic science. The general education courses are for all students.

Kinesiology and Health

Kinesiology and Health Faculty

E. Ash, D. Castillo, J. Dearden, M. Probst (Chair), D. Ross

Health Promotion

Health Promotion Area – Bachelor of Arts

Program Competencies

Students completing the program will be able to:

1. Discuss the components and functions of each facet of a comprehensive school health or health promotion program.
2. Communicate effectively, including the ability to write objectives, which address the three domains of education (cognitive, affective and psychomotor).
3. Effectively plan, implement and evaluate teaching units including various teaching strategies and/or methodologies, which address the 75 defined learner outcomes identified in the Kentucky Educational Reform Act.
4. Describe the various types of learners, and the learning strategies/methodologies which will address the needs of each learner classification.
5. Develop educational units that encourage cross-disciplinary integration.
6. Develop critical thinking and problem-solving skills.
7. Serve as a facilitator, health advocate, and resource professional for current and future issues in the profession of health.
8. Identify and effectively utilize appropriate resources pertaining to health.
9. Name professional organizations, current trends, and issues relevant to health.
10. Develop skills that will be conducive to the successful accumulation of knowledge and illustrate the applicability to real world situations.
11. Successfully develop measurement and evaluation instruments which will assess the health needs of the student, as well as effectiveness of instruction.

12. Effectively disseminate objective, non-biased health information and activities which will provide the student the opportunity to formulate personal values concerning health-related issues.
13. Develop the skills identified within the competencies/responsibilities of an entry-level health educator.

Assessment

1. Portfolios
2. Certified Health Education Specialist (CHES) - optional certification. Program completers are eligible to sit for this exam.
3. Employment survey data
4. External evaluation practicum/field experiences

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Core Requirements

HLTH 151	Wellness: Theory to Action	3
HLTH 203	Safety and First Aid	3
HLTH 205	Psychological Health	3
HLTH 206	Principles of Nutrition	3
HLTH 230	Community Health	3
HLTH 310	Health and Wellness Promotion	3
HLTH 360	Family Health	3
HLTH 408	General School Safety	3
HLTH 414	Principles of Epidemiology	3
HLTH 418	Use and Abuse of Drugs	3
HLTH 425	Planning, Managing and Evaluating Health/Wellness Promotion Programs	3
HLTH 435	Health Counseling	3
HLTH 471	Practicum	12
HPE 160	Foundations of Health and Physical Education	3
PHED 205	Lifetime Fitness	3
HLTH 499C	Senior Seminar in Health Promotion	3

Subtotal: 57

Health Promotion Electives

Choose one of the following:

PHED 306	Functional Anatomy/Biomechanics	3
BIOL 234	Principles of Human Anatomy and Physiology I	3

Subtotal: 3

Choose two of the following:

COMS 350	Communication, Culture and Diversity	3
HLTH 475	School Health Program	3
HLTH 477	Field Experience in Health	3
HLTH 480	Workshop	1-3
HLTH 489	Special Problems in Health	1-3
IMS 300	Ethical and Legal Issues in Health Care	3
IMS 303	Women's Health Care	3
IMS 304	Men's Health Issues	3
NURS 300	Ethical and Legal Issues in Health Care	3
NURS 303	Women's Health Care	3
NURS 304	Men's Health Issues	3
NURS 475	Human Sexuality	3
PHED 315	Motor Development and Motor Learning	3
PHED 326	Exercise Program Leadership	3
PHED 332	Principles of Strength & Conditioning	3
PHED 432	Physiology of Exercise	3
SOC 441	Issues in Aging	3
SOC 445	Death and Dying	3

Subtotal: 6

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Health Promotion Major – Bachelor of Arts

The health major and minor programs prepare individuals for positions in any of the five recognized work settings for health educators — school, community, college/university, worksite, or medical.

Program Competencies

Students completing the program will be able to:

1. Discuss the components and functions of each facet of a comprehensive school health or health promotion program.
2. Communicate effectively, including the ability to write objectives, which address the three domains of education (cognitive, affective and psychomotor).
3. Effectively plan, implement and evaluate teaching units including various teaching strategies and/or methodologies, which address the 75 defined learner outcomes identified in the Kentucky Educational Reform Act.
4. Describe the various types of learners, and the learning strategies/methodologies which will address the needs of each learner classification.
5. Develop educational units that encourage cross-disciplinary integration.
6. Develop critical thinking and problem-solving skills.
7. Serve as a facilitator, health advocate, and resource professional for current and future issues in the profession of health.
8. Identify and effectively utilize appropriate resources pertaining to health.
9. Name professional organizations, current trends, and issues relevant to health.
10. Develop skills that will be conducive to the successful accumulation of knowledge and illustrate the applicability to real world situations.
11. Successfully develop measurement and evaluation instruments which will assess the health needs of the student, as well as effectiveness of instruction.
12. Effectively disseminate objective, non-biased health information and activities which will provide the student the opportunity to formulate personal values concerning health-related issues.
13. Develop the skills identified within the competencies/responsibilities of an entry-level health educator.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

Health Promotion Requirements

HLTH 151	Wellness: Theory to Action	3
HPE 160	Foundations of Health and Physical Education	3
HLTH 205	Psychological Health	3
HLTH 206	Principles of Nutrition	3
HLTH 230	Community Health	3
HLTH 310	Health and Wellness Promotion	3
HLTH 360	Family Health	3
HLTH 408	General School Safety	3
	or	
HLTH 475	School Health Program	3
HLTH 414	Principles of Epidemiology	3
HLTH 418	Use and Abuse of Drugs	3
HLTH 425	Planning, Managing and Evaluating Health/Wellness Promotion Programs	3
HLTH 435	Health Counseling	3
HLTH 471	Practicum	12
HLTH 499C	Senior Seminar in Health Promotion	3
PHED 306	Functional Anatomy/Biomechanics	3
	or	
BIOL 234	Principles of Human Anatomy and Physiology I	3

Subtotal: 54

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Health Minor

Health Minor Requirements

Core Requirements

HLTH 151	Wellness: Theory to Action	3
HLTH 206	Principles of Nutrition	3
HLTH 230	Community Health	3
HLTH 414	Principles of Epidemiology	3

Subtotal: 12

Electives

Choose nine hours (three courses) from the following:

HLTH 205	Psychological Health	3
HLTH 310	Health and Wellness Promotion	3
HLTH 360	Family Health	3
HLTH 408	General School Safety	3
HLTH 418	Use and Abuse of Drugs	3
HLTH 430	Consumer Health	3
HLTH 435	Health Counseling	3
HLTH 477	Field Experience in Health	3
HLTH 480	Workshop	1-3

Subtotal: 9

Total Credit Hours: 21

Exercise Science Area – Bachelor of Science

Program Competencies

Students will demonstrate:

1. Knowledge and understanding of the biological and applied sciences, which lay the foundation for this area of study.
2. Knowledge of and ability to measure and assess physical wellness.
3. Ability to design, support and evaluate individuals in fulfilling programs designed to promote improved wellness.
4. Ability to develop, teach and assess exercise skills and activities.
5. Ability to develop, promote, administer and evaluate a variety of wellness programs.
6. Knowledge of wellness programs for all populations.

Assessment

1. Portfolios.
2. ACSM HFI Exam.
3. Employment Data.
4. Internship Data.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Exercise Science Area

HLTH 151	Wellness: Theory to Action	3
HLTH 203	Safety and First Aid	3
HLTH 206	Principles of Nutrition	3
	or	
NUTR 201	Principles of Nutrition	3
HLTH 310	Health and Wellness Promotion	3
HPE 160	Foundations of Health and Physical Education	3
PHED 205	Lifetime Fitness	3
PHED 220	Athletic Training I	3
PHED 301	Evaluation in Exercise Science	3
PHED 306	Functional Anatomy/Biomechanics	3
PHED 315	Motor Development and Motor Learning	3
PHED 326	Exercise Program Leadership	3
PHED 332	Principles of Strength & Conditioning	3
PHED 423	Exercise Management: Special Populations	3
PHED 424	Introduction to Therapeutic Exercise	3
PHED 432	Physiology of Exercise	3
PHED 441	Exercise Testing and Prescription	4
PHED 450	Planning and Managing Exercise Programs	3
PHED 499D	Senior Capstone in Exercise Science	3
CHEM 101	Survey of Chemistry	4
	or	
CHEM 111	Principles of Chemistry I	4

Subtotal: 59

Choose one group from the following:

Group 1

BIOL 234	Principles of Human Anatomy and Physiology I	3
BIOL 235	Principles of Human Anatomy and Physiology II	3

Subtotal: 6

Group 2

BIOL 244	Human Anatomy and Physiology I	4

BIOL 245	Human Anatomy and Physiology II	4
		Subtotal: 8

Choose two courses (six hours) from the following:

PHED 453A	Corporate Practicum	3
PHED 453B	Cardiopulmonary Rehabilitation Internship	3
PHED 453C	Musculoskeletal Rehabilitation Internship	3
		Subtotal: 6

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Strength and Conditioning Minor

Strength and Conditioning Minor Requirements

Core Requirements

PHED 220	Athletic Training I	3
PHED 306	Functional Anatomy/Biomechanics	3
PHED 332	Principles of Strength & Conditioning	3
PHED 432	Physiology of Exercise	3
PHED 453A	Corporate Practicum	3
		Subtotal: 15

Electives

Choose six hours (two courses) from the following:

PHED 326	Exercise Program Leadership	3
PHED 423	Exercise Management: Special Populations	3
PHED 424	Introduction to Therapeutic Exercise	3
PHED 450	Planning and Managing Exercise Programs	3
PHED 480	Workshop	1-3
PSY 360	Sports Psychology	3
		Subtotal: 6

Total Credit Hours: 21

Respiratory Care – Associate of Applied Science

Program Competencies

The graduate will be able to:

1. Communicate effectively.
2. Think critically.
3. Learn independently.
4. Examine relationships in diverse and complex environments.
5. Perform cardiopulmonary diagnostic procedures, patient assessment and respiratory care planning.
6. Administer therapeutic and life support procedures in the management of patients with cardiopulmonary impairment.
7. Evaluate appropriateness of prescribed respiratory care and recommend modifications where indicated.
8. Select, assemble, check, correct malfunctions and assure cleanliness and calibration of respiratory care equipment.
9. Maintain an ethical and effective relationship with the health care team.
10. Perform essential elements of patient education.
11. Demonstrate an awareness of organizational and management principles related to respiratory care.
12. Perform and act on the results of advanced patient assessment techniques.
13. Assist the physician in special procedures of cardiopulmonary care.
14. Demonstrate skills and attitudes needed to maintain professional and technical competence.

Assessment

National Board for Respiratory Care Applied Measurement Professional Self-Assessment Examination, National Board for Respiratory Care Respiratory Therapy Program Surveys for Graduates and Employers related to educational preparation, and graduate performance in the clinical area.

All the above assessment results are reported to faculty and the advisory committee annually. Employment is a key indicator of program success. This information is shared at annual advisory committee meetings.

Respiratory Care Program

The respiratory care program is a consortium between Morehead State University, Maysville Community and Technical College, and Ashland Community and Technical College. Morehead State University students, as a part of the consortium, complete all general education program requirements on the MSU campus. Respiratory care courses are taught on the Rowan campus of Maysville Community and Technical College.

The program prepares the graduate to take an active role in the maintenance and/or restoration of cardiopulmonary homeostasis. The curriculum includes intensive course work in the supporting sciences and general education areas. Classroom instruction is supplemented with learning experience in the campus laboratory and area affiliates. Students enrolled in the respiratory care program are required to achieve a minimum grade of "C" in all courses required for completion of the AAS in respiratory care.

Admission Requirements and Procedures

The AAS in respiratory care has a selective admission process. Enrollment in the program is limited (because of laboratory and classroom space) and student applications are assessed using a point-based system that includes student ACT score/Compass scores and grades. In the event there are more qualified applicants than available positions, one to three alternatives will be placed on a waiting list.

Application Procedure

1. Be unconditionally admitted to MSU.
2. Declare Respiratory Care as academic program.
3. University undergraduate catalog(s) required if transfer credit is sought.
4. Course syllabi for all respiratory care courses complete if transfer credit is sought.
5. Enroll in required prerequisite courses as outlined in the respiratory care curriculum sequence.
6. Submit a completed application packet to the Associate of Applied Science in Respiratory Care Program. The application packet includes:
   a. Application for admission to Respiratory Care program.
   b. ACT scores or equivalent.
   c. Official college transcript.
   d. Attendance at a preadmission conference or meeting with the program coordinator.
   e. Documentation of observation hours. (Observation form may be submitted after November 15 if observation hours are not yet completed.)

Student selection process occurs in the fall semester preceding spring admission. To be considered for official admission to the respiratory care program, all materials must be submitted to the respiratory care advisor before November 15 preceding spring admission:

Morehead State University
Respiratory Care Program Advisor

100B Lloyd Cassity
Morehead, KY 40351
m.probst@moreheadstate.edu

Admission Criteria

Admission procedures are reviewed on an annual basis. It is the applicant's responsibility to verify prior to the application deadline that the procedures/criteria have not been revised.

Applicants to the Respiratory Care Program are selected based upon the following criteria:

1. American College Test (ACT) scores or equivalent.
2. GED validation, if applicable. Preference will be given to a standard score of 50 or above.
3. Past performance in college/university: must have a GPA of 2.5 on a scale of 4.0 for all college level courses completed and a grade of "C" or better on BIOL 234 and MATH 135.

Respiratory courses will be taken at the Rowan campus of Maysville Community and Technical College on Mondays, Wednesdays and Fridays.

Conditions for Enrollment

1. Students may be assigned to clinical practicum areas other than those in the immediate Rowan County area, requiring traveling some distance from campus. Transportation to and from these settings is the responsibility of the student.
2. Clinical experiences and formal lectures may be required during various hours of the day, evening and night.
3. Students have the responsibility for the cost incurred by enrollment in the Associate of Applied Science in Respiratory Care. This cost may include clothing, equipment, malpractice insurance and academic materials.

Program Requirements

A total of 72 credit hours is required for the AAS degree. The student will be required to complete the course sequence approved by the University and in place at the time of admission to the associate degree respiratory care program. Respiratory Care program policies on challenge examination, transfer credit, academic standards and progression and criteria for taking the National Board for Respiratory Care examination can be obtained from the Department of Kinesiology, Health, and Imaging Sciences.

General Education

General Education Courses	(See GNED Course Listings)	18
MATH 135 or higher	(choose one)	3
		Subtotal: 21

Refer to the associate degree general education section (p. 29) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Respiratory Care Requirements

Complete the following with a "C" or better:

RCP 110	Cardiopulmonary Anatomy and Physiology	3
RCP 120	Theory and Principles of Respiratory Care	4
RCP 125	Cardiopulmonary Evaluation	4
RCP 135	Respiratory Pharmacology	1
RCP 150	Clinical Practice I	2
RCP 175	Clinical Practice II	3
RCP 180	Ventilatory Support	3
RCP 190	Advanced Ventilatory Support	2
RCP 200	Clinical Practice III	3
RCP 204	Emergency and Special Procedures I	3
RCP 210	Cardiopulmonary Pathophysiology	3
RCP 212	Neonatal/Pediatric Respiratory Care	3
RCP 214	Emergency and Special Procedures II	3
RCP 225	Clinical Practice IV	3
RCP 228	Preventative and Long-Term Respiratory Care	2
RCP 250	Clinical Practice V	3
		Subtotal: 45

Additional Program Requirements

Complete the following with a "C" or better:

BIOL 234	Principles of Human Anatomy and Physiology I	3
BIOL 235	Principles of Human Anatomy and Physiology II	3
MATH 135 or higher	(choose one)	3
		Subtotal: 9

Program Electives

Complete one of the following with a "C" or better:

PSY 154	Introduction to Psychology	3
SOC 101	Introduction to Sociology	3
		Subtotal: 3

Total Credit Hours: 72

Imaging Sciences

Imaging Sciences Faculty

G. Clark (Diagnostic Medical Sonography Program Director), A. Dotson (Radiological Science Clinical Coordinator), J. Fannin (Radiologic Science Program Director & Computed Tomography/Magnetic Resonance Interim Program Director), R. Gevedon (Computed Tomography/Magnetic Resonance Clinical Coordinator), J. Shepherd (Diagnostic Medical Sonography Clinical Coordinator)

The Department of Kinesiology, Health, and Imaging Sciences offers an Associate of Applied Science degree in Radiologic Science (AAS) and a Bachelor of Science degree in Imaging Sciences (BS) with areas in computed tomography/magnetic resonance, diagnostic medical sonography and leadership in medical imaging.

Radiologic Science Program

The associate degree program in Radiologic Science has a selective admission process based on completion of 30-credit hours of required pre-radiologic science courses with a minimum 2.5 grade point average and a minimum grade of "C" in each course.

Students must apply for admission by the fourth Friday in May of each year. Students are officially admitted into the program in the fall semester. The program consists of two years of radiologic science courses. The additional general education requirements for the baccalaureate degree may also be taken in conjunction with the courses of the associate degree.

Upon completion, the students will receive an Associate of Applied Science degree and may be eligible to apply for the American Registry of Radiologic Technologists (ARRT) National Certification Examination in radiography.

Radiologic Science – Associate of Applied Science

Admission

Following completion of the pre-admission courses and admission to the program, the associate degree program in Radiologic Science requires 21 months to prepare graduates for careers in radiography or for continuation into one of the baccalaureate degree tracks at MSU: Computed Tomography/Magnetic Resonance (CTMR), Diagnostic Medical Sonography (DMS), or Leadership in Medical Imaging (LMI). The Radiologic Science program has a selective admission process, which is separate and in addition to the University's admission procedure. The number of available

clinical positions limits enrollment in the Radiologic Science program. Candidates for the programs will be ranked according to GPA in the 27-30 credit hours of required pre-admission courses.

Student must apply for admission to the Radiologic Science program by the fourth Friday in May. Students are officially admitted into the program in the following fall semester. Students who plan to continue into the baccalaureate degree programs following completion of the associate degree, may take the required additional general education courses in conjunction with the courses for the associate degree.

Upon completion, the students will receive an Associate of Applied Science degree and may be eligible to apply for the American Registry of Radiologic Technologists (ARRT) National Certification Examination in Radiography.

Admission Criteria for Radiologic Science AAS

1. Unconditional acceptance to Morehead State University through the Office of Enrollment Services. The office may be contacted at 606-783-2000.
2. Completion of the following pre-admission courses (27-30 hours) with a minimum grade of "C" (some courses can be transferred from other institutions):
   a. BIOL 234 and BIOL 235 (6 hrs.) or BIOL 244 and BIOL 245 (8 hrs.)
   b. COMS 108 (3 hrs.)
   c. ENG 100 (3 hrs.)
   d. ENG 200 (3 hrs.)
   e. MATH 152, MATH 174, or MATH 175 (3-4 hrs.)
   f. IMS/NURS 202 (2 hrs.)
   g. PSY 154 (3 hrs.)
   h. *FYS 101 (3 hrs.)
   i. **RSCI 110 (1 hr.)

   *Transfer students with more than 24 credit hours are exempt from this course and must complete an additional social and behavioral science course to meet general education requirements.

   **Consideration may be granted for this course to be completed after admission during the first semester.
3. More than two failures of pre-admission radiologic science courses within two complete academic years will result in ineligibility for admission. This includes failure of more than two courses or failure of the same course more than twice. Students with course failure(s) prior to the two-year period (two complete academic years) will be considered for admission if the student has demonstrated satisfactory academic progress ("C" or above in required courses) since the course failures.
4. A GPA of 2.5 or higher (with no rounding) and a minimum grade of "C" in each pre-admission course and a cumulative GPA of 2.0 on all college work.
5. Possess current certification in Basic Life Support for Health Care Providers (CPR) by the American Heart Association.
6. Meet the established health and physical capability requirements:
   a. Vision capabilities
      i. Normal or corrected refraction within the range of 20/20 to 20/60.
      ii. Recognition of color shade changes.
   b. Auditory capabilities
      i. Possess normal or corrected hearing ability within 0 to 45-decibel range.
   c. Tactile capabilities:
      i. Perception of temperature change and pulsation and to differentiate between various textures and structures in at least one hand.
      ii. Recognition of an object by touching and handling.
   d. Language capabilities
      i. Fluent verbal communication.
   e. Minimal motor capabilities
      i. Secure grasp with two functional upper limbs.
      ii. Push and/or pull movable objects weighing 100-150 lbs.
      iii. Lift at least 25 lbs. without assistance.
      iv. Stand for long periods of time.
      v. Walk without assistance of canes, crutches, walkers and/or humans.
      vi. Reach above shoulders and below waist.
      vii. Twist, bend, stoop/squat and move quickly.
   f. Mental health
      i. Adaptation to the environment, function in everyday activities, and cope with stressors.
   g. Freedom from transmittable diseased as documented by:
      i. Negative PPD and/or chest x-ray within immediate past 12 months.
      ii. Rubella and rubeola antibody test (titer values that indicate immunity) documentation of MMR (rubella and rubeola and mumps) vaccine.
      iii. Hepatitis B vaccine series.
      iv. Varicella zoster live-virus vaccine or reliable history of varicella (chicken pox) or serologic evidence of immunity.
      v. Immunization as recommended by the Advisory Committee on Immunization Practices of the U.S. Public Health Service and the Committee on Infectious Diseases of the American Academy of Pediatrics.

Application Procedure

Applications will be accepted between January 1 and the fourth Friday in May.

1. Submit a complete application packet with the following required materials:
   a. Imaging Sciences Admission Application, Associate of Applied Science Degree in Radiologic Science. Applicants must indicate the program of interest on the application.
   b. Official transcript(s) documenting all courses required for admission. Note: this official transcript for the department is in addition to transcripts submitted for admission to MSU.
   c. Copy of course description(s) if course equivalencies are not listed on the transfer credit website located at https://moreheadstate.edu/academics/academic-affairs/registrar/.
2. Mail complete application packet to:
   Morehead State University
   Department of Kinesiology, Health, and Imaging Sciences
   Radiologic Science Program Associate of Applied Science
   CHER 210D
   316 West Second Street
   Morehead, KY 40351
   Phone: 606-783-2646

Requirements for the Completion of an Associate of Applied Sciences Degree in Radiologic Science

1. Complete a minimum of 77 semester credit hours including general education credits, radiologic science core courses, and other required courses.

2. Earn a minimum cumulative GPA of 2.0 on all work completed at the University.
3. Complete at least 16 semester hours at MSU, including one semester preceding graduation. Regional campus sites satisfy this requirement, however, correspondence courses do not.
4. Complete one semester of FYS 101 — First Year Seminar during the student's first semester if the student begins as a freshman or transfers to MSU with less than 24 credit hours.

Fees and Expenses

Fees and expenses specific to the Imaging Sciences programs are in addition to those required by MSU. These are subject to change without prior notification. The students are responsible for the purchase of white uniforms, white hose (if applicable), white clinical shoes, white lab coat, malpractice insurance, laboratory fees, dosimeter related fees, film marker fees (if applicable), and all housing and transportation expenses incurred during clinical internship assignments. Students are also responsible for all fees for criminal background checks, drug-testing, practice and actual certification examinations and all applicable course fees.

Additional Information

1. Students may be assigned to clinical internships requiring distant travel or relocation.
2. Clinical internship hours, online coursework, and formal class sessions may be required during various hours of the day, evening and night.

Program Competencies

Goals

1. Students will be clinically competent.
2. Students will communicate effectively.
3. Students will use critical thinking skills.
4. Students will evaluate the importance of professionalism.

Student Learning Outcomes

1. Students apply positioning skills.
2. Students practice radiation protection practices.
3. Students use effective oral communication skills.
4. Students practice effective written communication skills.
5. Students manipulate technical factors to obtain optimal results for non-routine examinations.
6. Students apply the principles of radiographic physics to solve a practical problem.
7. Students recognize the importance of continued professional development.
8. Students exhibit professional behaviors.

Assessment

1. Survey of graduates.
2. Survey of employers.
3. Monitoring of licensure examinations.
4. Program enrollment records.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	18
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 21

Refer to the associate degree general education section (p. 29) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

AAS Requirements

Radiologic Science Core Requirements

RSCI 110	Introduction to Radiological Sciences	1
RSCI 200	Patient Care	3
RSCI 206	Radiographic Anatomy, Positioning and Imaging Production I	6
RSCI 210	Radiographic Equipment and Imaging I	3
RSCI 230	Radiography Clinical Internship I	10
RSCI 310	Radiographic Anatomy, Positioning and Image Production II	4
RSCI 320	Radiography Clinical Internship II	10
RSCI 330	Imaging Pathology	2
RSCI 335	Radiation Biology and Protection	2
RSCI 340	Radiographic Equipment and Imaging II	3
RSCI 346	Radiation Physics and Electronics	2
RSCI 350	Seminar in Radiography	2
IMS 202	Medical Terminology	2
PSY 154	Introduction to Psychology	3
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 53

Take the following:

Choose one group:

BIOL 234	Principles of Human Anatomy and Physiology I	3
	or	
BIOL 244	Human Anatomy and Physiology I	4
		Subtotal: 3-4

Choose one group:

BIOL 235	Principles of Human Anatomy and Physiology II	3
	or	
BIOL 245	Human Anatomy and Physiology II	4
		Subtotal: 3-4

Total Credit Hours: 74

Imaging Sciences Programs

The baccalaureate degree imaging sciences program is a four-year program of study with tracks in Computed Tomography/Magnetic Resonance (CTMR), Diagnostic Medical Sonography (DMS), and Leadership in Medical Imaging (LMI). The programs have selective admissions policies, which are separate and in addition to the University's admission procedure. The number of available clinical positions limits enrollment in the CTMR and DMS program. Candidates for the programs will be ranked according to GPA in the general education courses, support courses, and radiography courses.

Students must apply for admission to the CTMR or DMS programs by the first Monday in April. Students are officially admitted into the programs in the following Summer II term. The CTMR Program requires 11 months for completion and the DMS Program requires 13 months for completion. Applications to the LMI program are accepted for fall or spring semesters. The LMI Program is totally online and self-paced.

Upon completion of the CTMR Program and the American Registry of Radiologic Technologists (ARRT) clinical requirements, the graduate may be eligible to sit for the ARRT National Certification Examination in Computed Tomography and Magnetic Resonance. Upon completion of the DMS Program, the graduate may be eligible to sit for the American Registry of Diagnostic Medical Sonography (ARDMS) National Certification Examinations in Sonography Principles and Instrumentation (SPI), Abdomen (AB) and Obstetrics & Gynecology (OB/GYN).

Imaging Sciences - Bachelor of Science

Admission

1. Unconditional acceptance to Morehead State University through the Office of Enrollment Services. The office may be contacted at 606-783-2000.
2. Completion of the following pre-admission courses (81-84 hours) with a minimum grade of "C" (some courses can be transferred from other institutions):
   a. BIOL 235 (3 hrs.)
   b. COMS 108 (3 hrs.)
   c. ENG 100 (3 hrs.)
   d. ENG 200 (3 hrs.)
   e. MATH 152, MATH 174, or MATH 175 (3-4 hrs.)
   f. IMS/NURS 202 (2 hrs.)
   g. General Education Humanities courses (6 hrs.)
   h. BIOL 234 (General Education Natural Science course) and Natural Science elective course (6 hrs.)
   i. General Education Social and Behavioral Science courses (6 hrs.)
   j. *FYS 101 (3 hrs.) Pre-licensure Radiography Credits (up to 40** hrs. of transfer credits)

   *Transfer students with more than 24 credit hours are exempt from this course and must complete an additional social and behavioral science course to meet general education requirements. FYS 101 or the additional social and behavioral sciences course is not calculated in admission GPA.

   **The number of hours of the pre-licensure component may vary depending on the specific program the student completed. If fewer than 40 hours are available for transfer, additional specific courses will be required at MSU to meet the program requirements.
3. More than two failures of pre-radiologic science courses within two complete academic years will result in ineligibility for admission. This includes failure of more than two courses or failure of the same course more than twice. Students with course failure(s) prior to the two-year period (two complete academic years) will be considered for admission if the student has demonstrated satisfactory academic progress ("C" or above in required courses) since the course failures.
4. A GPA of 2.5 or higher for all required college work.
5. Graduate of the associate degree radiologic science program at MSU or other radiography program accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). Graduates of non-JRCERT programs will be considered on an individual or program basis.
6. Registered in radiography and in good standing with the ARRT. Applicants who are ARRT radiography registry-eligible must obtain certification prior to the beginning of the fall semester.
7. Meet the established health and physical capability requirements:
   a. Vision capabilities
      i. Normal or corrected refraction within the range of 20/20 to 20/60.
      ii. Recognition of color shade changes.
   b. Auditory capabilities
      i. Possess normal or corrected hearing ability within 0 to 45-decibel range.
   c. Tactile capabilities:
      i. Perception of temperature change and pulsation and to differentiate between various textures and structures in at least one hand.
      ii. Recognition of an object by touching and handling.
   d. Language capabilities
      i. Fluent verbal communication.
   e. Minimal motor capabilities
      i. Secure grasp with two functional upper limbs.
      ii. Push and/or pull movable objects weighing 100-150 lbs.
      iii. Lift at least 25 lbs. without assistance.
      iv. Stand for long periods of time.
      v. Walk without assistance of canes, crutches, walkers and/or humans.
      vi. Reach above shoulders and below waist.
      vii. Twist, bend, stoop/squat and move quickly.
   f. Mental health
      i. Adaptation to the environment, function in everyday activities, and cope with stressors.
   g. Freedom from transmittable diseased as documented by:
      i. Negative PPD and/or chest x-ray within immediate past 12 months.
      ii. Rubella and rubeola antibody test (titer values that indicate immunity) documentation of MMR (rubella and rubeola and mumps) vaccine.
      iii. Hepatitis B vaccine series.
      iv. Varicella zoster live-virus vaccine or reliable history of varicella (chicken pox) or serologic evidence of immunity.
      v. Immunization as recommended by the Advisory Committee on Immunization Practices of the U.S. Public Health Service and the Committee on Infectious Diseases of the American Academic of Pediatrics.

Note: The establishment of thorough and effective screening procedures for patients and other individuals is one of the most critical components of a program that guards the safety of all those preparing to undergo MR procedures or to enter the MR environment. An important aspect of protecting patients and the individuals from MR system-related accidents and injuries involves an understanding of the risks associated with the various implants, devices, accessories, and other objects that may cause problems in this setting. This requires constant attention and diligence to obtain information and documentation about these objects to provide the safest MR setting possible.

MSU faculty want to provide students and patients with a safe clinical environment; therefore, the program requires students to complete the MR Safety Screening Form prior to acceptance into the program. This form must be completed by a qualified practitioner. Any questions or concerns may be addressed be contacting the CTMR Program at 606-783-2646.

Application Procedure

Applications for the CTMR and DMS programs will be accepted between January 1 and the first Monday in April.

1. Submit a complete application packet with the following required materials:
   a. Imaging Sciences Admission Application, Bachelor of Science Degree in Imaging Sciences. Applicants may apply for one or both programs; however, each program has a separate application process.
   b. Official transcript(s) documenting all courses required for admission. Note: this official transcript for the department is in addition to transcripts submitted for admission to MSU. Students currently enrolled are required to submit spring midterm grades for consideration. Students attending institutions that do not provide midterm grades must submit a letter from the radiography

program coordinator or individual faculty in general education courses stating the student's letter grade at mid-semester for each course. All letters must be submitted on official institutional letterhead. Students must complete required courses with a "C" or better and maintain a GPA of 2.5 or higher.

c. Copy of course description(s) if course equivalencies are not listed on the transfer credit website located at https://moreheadstate.edu/academics/academic-affairs/registrar/.

d. Copy of the current AART registration card for radiography. Applicants who are not registered, but are registry eligible must obtain certification prior to the beginning of the Summer II term.

e. Copy of the current AART CT or MR registration card (if applicable).

f. Copy of the current ARDMS registration card (if applicable).

Note: Qualified applicants will be ranked by GPA in the BSIS pre-admission courses.

2. Mail complete application packet to:
Morehead State University
Department of Kinesiology, Health, and Imaging Sciences
Bachelor of Science in Imaging Sciences
CHER 210D
316 West Second Street
Morehead, KY 40351
Phone: 606-783-2646

Requirements for Completion of a Bachelor of Science Degree in Imaging Sciences

1. Complete a minimum of 120 credit hours, of which, a minimum of 42 credit hours must be upper division courses (numbered 300 or above). The total credit hours include general education, program core, and program track courses.
2. Earn a minimum cumulative GPA of 2.0 on all work completed at the University.
3. Minimum grade of "C" required in all courses in the program.
4. Complete at least 30 credit hours at MSU with the last 15-hours preceding graduation earned at MSU. Regional campus sites satisfy this requirement; however, correspondence courses do not.

Fees and Expenses

Fees and expenses specific to the Imaging Sciences programs are in addition to those required by MSU. These are subject to change without prior notification. The students are responsible for the purchase of solid dark gray uniforms, white hose (if applicable), white or black clinical shoes, dark gray lab coat, clinical record-keeping software costs, malpractice insurance, laboratory fees, dosimeter related fees, film marker fees (if applicable), and all housing and transportation expenses incurred during clinical internship assignments. Students are also responsible for all fees for criminal background checks, drug-testing, certification examinations and all applicable course fees.

Additional Information

1. Students may be assigned to clinical internships requiring distant travel or relocation.
2. Clinical internship hours, online coursework, and formal class sessions may be required during various hours of the day, evening and night.

Imaging Sciences Area (Computed Tomography/Magnetic Resonance Track) – Bachelor of Science

Mission Statement

The CTMR Program, in conjunction with the Department and University's mission, is committed to preparing graduates to function as component computed tomography and magnetic resonance technologists and to provide a foundation for continued life-long learning designated in computed tomography/magnetic resonance.

Program Competencies

CT Goals and Student Learning Outcomes (SLOs)

1. Students will be clinically competent.
   a. Students select appropriate scan parameters to provide optimal image quality.
   b. Students employ proper radiation and safety practices in the clinical setting.
2. Students will employ critical thinking skills.
   a. Students adapt imaging parameters for pathological considerations.
   b. Students apply scientific inquiry in the application of computed tomography.
3. Students will model professionalism.
   a. Students analyze the importance of professionalism in the practice of imaging.
   b. Students participate in a professional imaging activity.
4. Students will employ effective communication skills in the healthcare environment.
   a. Students demonstrate appropriate communication skills.
   b. Student utilize appropriate communication skills in education the patient on general aspects of computed tomography and procedure specifics.

MR Goals and Student Learning Outcomes (SLOs)

1. Students will be clinically competent.
   a. Students select appropriate scan parameters to provide optimal image quality.
   b. Students employ proper safety practices in the clinical setting.
2. Students will employ critical thinking skills.
   a. Students adapt imaging parameters for pathological considerations.
   b. Students apply scientific inquiry in the application of magnetic resonance.
3. Students will model professionalism.
   a. Students analyze the importance of professionalism in the practice of imaging.
   b. Students participate in a professional activity.
4. Students will employ effective communication skills in the healthcare environment.
   a. Students demonstrate appropriate communication skills.
   b. Students utilize appropriate communication skills in educating the patient on general aspects of magnetic resonance and procedure specifics.

Assessment

1. Survey of graduates.
2. Survey of employers.
3. Monitoring of certification examinations.

4. Program enrollment records.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Imaging Sciences Core Requirements

RSCI 200	Patient Care	3
RSCI 206	Radiographic Anatomy, Positioning and Imaging Production I	6
RSCI 210	Radiographic Equipment and Imaging I	3
RSCI 230	Radiography Clinical Internship I	10
RSCI 310	Radiographic Anatomy, Positioning and Image Production II	4
RSCI 320	Radiography Clinical Internship II	10
RSCI 335	Radiation Biology and Protection	2
RSCI 346	Radiation Physics and Electronics	2
IMS/NURS 202	Medical Terminology	2
BIOL 234	Principles of Human Anatomy and Physiology I	3
BIOL 235	Principles of Human Anatomy and Physiology II	3
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 51-52

CTMR Track Requirements

CTMR 403	Computed Tomographic Physics and Instrumentation	3
CTMR 405	Computed Tomography/Magnetic Resonance Sectional Anatomy	4
CTMR 413	Advanced Patient Care	3
CTMR 443	Imaging Procedures in Computed Tomography	4
CTMR 451	Magnetic Resonance Physical Principles of Image Formation	4
CTMR 455	Imaging Procedures in Magnetic Resonance	3
CTMR 461	Magnetic Resonance Practicum	8
CTMR 467	Computed Tomography Practicum I	8
CTMR 483	Seminar in Computed Tomography	2
CTMR 499C	Seminar in Magnetic Resonance	3
		Subtotal: 42

Upon permission, experienced sonographers may elect to take "CLEP" tests for credit in subjects they have mastered. Refer to the University and department "CLEP" policies for additional information.

Total Credit Hours: 120

Imaging Sciences Area (Diagnostic Medical Sonography Track) – Bachelor of Science

Program Competencies

DMS Goals and Student Learning Outcomes (SLOs)

Students will:

1. Be prepared to practice as competent entry level sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.
   a. Students manipulate equipment controls to provide optimum image quality.
   b. Students recognize and differentiate various pathologies.
   c. Students exhibit professional and ethical behavior during sonographic procedures.
   d. Students complete the diagnostic medical sonography program and gain employment.
   e. Graduates must pass the American Registry of Diagnostic Medical Sonographers credentialing examinations.
2. Integrate scientific knowledge and technical skills with effective communication methods to provide quality care and useful diagnostic information.
   a. Students practice effective oral communication skills.
   b. Students practice effective written communication skills.
3. Employ critical thinking.
   a. Students analyze sonographic principles and apply the information.
   b. Students demonstrate competence in the performance of diagnostic medical sonography procedures.

Assessment

1. Survey of graduates.
2. Survey of employers.
3. Monitoring of certification examinations.
4. Program enrollment records.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Imaging Sciences Core Requirements

RSCI 200	Patient Care	3
RSCI 206	Radiographic Anatomy, Positioning and Imaging Production I	6
RSCI 210	Radiographic Equipment and Imaging I	3
RSCI 230	Radiography Clinical Internship I	10
RSCI 310	Radiographic Anatomy, Positioning and Image Production II	4
RSCI 320	Radiography Clinical Internship II	10
RSCI 335	Radiation Biology and Protection	2
RSCI 346	Radiation Physics and Electronics	2
BIOL 234	Principles of Human Anatomy and Physiology I	3
BIOL 235	Principles of Human Anatomy and Physiology II	3
IMS/NURS 202	Medical Terminology	2
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 51

DMS Track Requirements

DMS 400	Introduction to Sonography	1
DMS 402A	Scanning Techniques I	1
DMS 408	Sonographic Sectional Anatomy	2
DMS 410	Abdominal Sonography	2

DMS 412A	Scanning Techniques II	1
DMS 416A	Scanning Techniques III	1
DMS 418	Genitourinary Sonography	2
DMS 420	Sonographic Physics and Instrumentation I	2
DMS 426A	Scanning Techniques IV	1
DMS 428	Obstetrical Sonography	2
DMS 430	Sonography Internship I	6
DMS 438	Selected Topics in Sonography	2
DMS 441	Sonographic Physics and Instrumentation II	2
DMS 442A	Scanning Techniques V	1
DMS 450	Sonography Internship II	6
DMS 470	Sonography Internship III	4
DMS 490	Sonography Internship	3
DMS 499C	Seminar in Sonography	3
		Subtotal: 42

Upon permission, experienced sonographers may elect to take "CLEP" tests for credit in subjects they have mastered. Refer to the University and department "CLEP" policies for additional information.

Total Credit Hours: 120

Leadership in Medical Imaging Area – Bachelor of Science

The Leadership in Medical Imaging program, in conjunction with the department and University's mission, is committed to preparing graduates to function as competent leaders in the imaging sciences profession and to provide a pathway for continued lifetime learning in imaging sciences.

Admission Criteria

1. Unconditional acceptance to Morehead State University through the Office of Enrollment Services.
2. Graduate of programmatic accredited program (radiography, computed tomography, magnetic resonance, diagnostic medical sonography, nuclear medicine, or radiation therapy). Non-programmatic accredited programs will be reviewed on an individual basis.
3. Completion of the following 15 credit hours of prerequisite courses:
   a. CIS 101 – Computer Literacy – (three credit hours)
   b. COMS 108 – Fundamentals of Speech Communication – (three credit hours)
   c. ENG 100 – Writing I – (three credit hours)
   d. ENG 200 – Writing II – (three credit hours)
   e. MATH 131 or Higher – Mathematical Reasoning and Problem Solving – (three credit hours)
4. Have a cumulative GPA of 2.5 on all coursework for admission to the degree program.
5. Registered and in good standing by a respective certification agency, for example American Registry of Radiologic Technologists (ARRT), American Registry of Diagnostic Medical Sonography (ARDMS) or Nuclear Medicine Technology Certification Board (NMTCB).

Application Procedure

Applications will be accepted beginning in January for the fall semester and must be received by the fourth Monday in March. Applications will be accepted beginning in August for the spring semester and must be received by the fourth Monday in October. Late applications may be considered until the class is filled.

Submit a complete application packet with the following required materials:

1. Imaging Sciences BSIS Admission Application designating the Leadership in Medical Imaging online program.
2. Official transcripts documenting all courses required for admission.
3. Copy of course description(s) if course equivalencies are not listed on the transfer credit website located at https://moreheadstate.edu/academics/academic-affairs/registrar/.
4. Copy of current certification card, for example American Registry of Radiologic Technologists (ARRT), American Registry of Diagnostic Medical Sonography (ARDMS), or Nuclear Medicine Technology Certification Board (NMTCB).

Program Competencies

Goals

1. Students integrate methods of leadership, management, teaching/learning and health care regulations into professional practice.
2. Students employ critical thinking and communication skills in the practice of imaging sciences.

Student Learner Outcomes

1. Students discuss healthcare regulation methods.
2. Students evaluate leadership methods.
3. Students analyze management methods.
4. Students compare methods of teaching/learning.
5. Students demonstrate effective communication skills.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

LMI Requirements

IMS 321	Introduction to Multidisciplinary Health Services	3
IMS 331	Issues and Trends in Health Care Delivery	3
IMS 341	Sectional Anatomy for the Medical Imaging Professional	3
IMS 351	Picture Archiving and Communication Systems	3
IMS 361	Leadership for the Health Care Professional	3
IMS 401	Health Care Law and Policy	3
IMS 421	Program Planning, Evaluation, and Assessment	3
IMS 431	Operations Management in Healthcare	3
IMS 471	Teaching Methodologies in Imaging Sciences	3
IMS 481	Fiscal Management in Healthcare	3
IMS 491	Curriculum Development in Imaging Sciences	3
IMS 499C	Senior Seminar in Imaging Sciences	3
		Subtotal: 36

Additional Program Requirements

CIS 101	Computer Literacy	3
BIOL 234	Principles of Human Anatomy and Physiology I	3
		Subtotal: 6

Choose one of the following:

RSCI 375	Radiologic Sciences Transition (for transfer students)	38
	or	
RSCI 110	Introduction to Radiological Sciences	1
RSCI 200	Patient Care	3
RSCI 206	Radiographic Anatomy, Positioning and Imaging Production I	6
RSCI 210	Radiographic Equipment and Imaging I	3
RSCI 230	Radiography Clinical Internship I	10
RSCI 300	Film Critique and Evaluation	2
RSCI 310	Radiographic Anatomy, Positioning and Image Production II	4
RSCI 320	Radiography Clinical Internship II	10
RSCI 330	Imaging Pathology	2
RSCI 335	Radiation Biology and Protection	2
RSCI 340	Radiographic Equipment and Imaging II	3
RSCI 346	Radiation Physics and Electronics	2
RSCI 350	Seminar in Radiography	2
		Subtotal: 38-50

RSCI 375: Block transfer for the respective discipline area of courses completed during the first two years of a professional curriculum.

Students must complete 42 semester hours which must be courses numbered 300 or above. Refer to the bachelor's degree requirements for additional information.

Approved Courses for Transfers

If transfer courses do not equate to the required hours, the students must complete the needed hours from the approved courses listed below to meet the degree requirements of 120.

COMS 290	Conflict and Communication	3
IMS 300	Ethical and Legal Issues in Health Care	3
IMS 302	Health Maintenance Through Life	3
MATH 353	Statistics	3
MNGT 201	Principles of Management	3
SOC 354	Individual and Society	3
		Subtotal: 0-10

Total Credit Hours: 120

Mathematics Department

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Faculty

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The Department of Mathematics is committed to the education of students who intend (1) to teach mathematics at any level, (2) to apply mathematics in industry or government, or (3) to use mathematical techniques and concepts in their chosen fields.

Mathematics Area (General Track) – Bachelor of Science

Program Competencies

The student exiting the programs in the mathematical sciences will:

1. Analyze and solve problems in the areas of algebra, analysis, statistics and geometry. The student should be able to work individually and as a member of a team. Depending on the program emphasis, the student should possess the concept comprehension skills mentioned above at a sufficient level of expertise to function successfully as a teacher of mathematics, as a contributing member in business or industry, or as a graduate student pursuing an advanced degree in mathematics or statistics.
2. Use technology as an aid in the solution of problems. Specifically, the student should be able to write and effectively use programs for computers and graphing calculators.
3. Develop appropriate learning skills to foster the investigation of mathematical ideas and direct his/her own learning.
4. Communicate the mathematical ideas learned in the program to others. This ability should exist in both written and oral forms of communication.

Assessment

1. Senior capstone and thesis.
2. Survey of graduates.
3. Exit interviews.
4. Major Field Achievement Test.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Math Core Requirements

MATH 170	Introduction to Computer Science	4
MATH 175	Calculus I	4
MATH 195	Mathematical Communication I	1
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 295	Mathematical Communication II	1
MATH 300	Introduction to Mathematical Proofs	3
MATH 301	Elementary Linear Algebra	3
MATH 308	Discrete Mathematics	3
MATH 312	Numerical Methods	3
MATH 315	Functions and Modeling	3
MATH 450	Modern Algebra	3
MATH 363	Differential Equations	3
MATH 365	Introduction to Mathematical Statistics	3
MATH 410	Introduction to Real Analysis	3
MATH 499C	Capstone and Senior Thesis I	2
MATH 499D	Capstone and Senior Thesis II	1
		Subtotal: 48

General Track Requirements

PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5
		Subtotal: 10

Choose one of the following:

MATH 481	Mathematics for Scientists and Engineers	3
MATH 355	Operations Research	3
		Subtotal: 3

Choose one of the following:

MATH 404	Topology	3
MATH 486	Complex Variables	3
		Subtotal: 3

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Mathematics Area (Data Analytics Track) – Bachelor of Science

Program Competencies

The student exiting the programs in the mathematical sciences will:

1. Analyze and solve problems in the areas of algebra, analysis, statistics and geometry. The student should be able to work individually and as a member of a team. Depending on the program emphasis, the student should possess the concept comprehension skills mentioned above at a sufficient level of expertise to function successfully as a teacher of mathematics, as a contributing member in business or industry, or as a graduate student pursuing an advanced degree in mathematics or statistics.
2. Use technology as an aid in the solution of problems. Specifically, the student should be able to write and effectively use programs for computers and graphing calculators.
3. Develop appropriate learning skills to foster the investigation of mathematical ideas and direct his/her own learning.
4. Communicate the mathematical ideas learned in the program to others. This ability should exist in both written and oral forms of communication.

Assessment

1. Senior capstone and thesis.
2. Survey of graduates.
3. Exit interviews.
4. Major Field Achievement Test.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Math Core Requirements

MATH 170	Introduction to Computer Science	4
MATH 175	Calculus I	4
MATH 195	Mathematical Communication I	1
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 295	Mathematical Communication II	1
MATH 300	Introduction to Mathematical Proofs	3
MATH 301	Elementary Linear Algebra	3
MATH 308	Discrete Mathematics	3
MATH 312	Numerical Methods	3
MATH 315	Functions and Modeling	3
MATH 450	Modern Algebra	3
MATH 363	Differential Equations	3
MATH 365	Introduction to Mathematical Statistics	3
MATH 410	Introduction to Real Analysis	3
MATH 499C	Capstone and Senior Thesis I	2
MATH 499D	Capstone and Senior Thesis II	1
		Subtotal: 48

Data Analytics Track Requirements

ETM 319	Quality and Reliability Engineering	3
MATH 355	Operations Research	3
MATH 419	Probability	3
MATH 420	Mathematical Statistics	3
MATH 453	Concepts in the Design of Experiments	3
MATH 455	Linear Statistical Models	3
MATH 456	Nonparametric Statistics	3
CIS 205	Introduction to Programming - C++	3
CS 303	Data Structures	3
CS 310	Algorithms and Advanced Data Structures	3
CS 420	Data Mining Concepts	3
CS 430	Machine Learning	3
		Subtotal: 36

Take six hours (two semesters) from the following:

MATH 385	Mathematics in Business, Industry, and Government	3
		Subtotal: 6

Total Credit Hours: 120

Mathematics Major (General Track) – Bachelor of Science

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Math Major Core Requirements

MATH 170	Introduction to Computer Science	4
MATH 175	Calculus I	4
MATH 195	Mathematical Communication I	1
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 295	Mathematical Communication II	1
MATH 300	Introduction to Mathematical Proofs	3
MATH 301	Elementary Linear Algebra	3
MATH 308	Discrete Mathematics	3
MATH 315	Functions and Modeling	3
MATH 365	Introduction to Mathematical Statistics	3
MATH 499C	Capstone and Senior Thesis I	2
MATH 499D	Capstone and Senior Thesis II	1
UTCH 250	Perspectives on Science and Mathematics	3
		Subtotal: 39

General Track Requirements

Complete 12 hours of mathematics electives above MATH 300 except MATH 305, MATH 330, or MATH 332 as approved by the department chair.

Subtotal: 12

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Mathematics Major (Actuarial Track) – Bachelor of Science

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4

Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Math Major Core Requirements

MATH 170	Introduction to Computer Science	4
MATH 175	Calculus I	4
MATH 195	Mathematical Communication I	1
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 295	Mathematical Communication II	1
MATH 300	Introduction to Mathematical Proofs	3
MATH 301	Elementary Linear Algebra	3
MATH 308	Discrete Mathematics	3
MATH 315	Functions and Modeling	3
MATH 365	Introduction to Mathematical Statistics	3
MATH 499C	Capstone and Senior Thesis I	2
MATH 499D	Capstone and Senior Thesis II	1
UTCH 250	Perspectives on Science and Mathematics	3

Subtotal: 39

Actuarial Track Requirements

ACCT 281	Principles of Financial Accounting	3
ACCT 282	Principles of Managerial Accounting	3
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
FIN 360	Business Finance	3
FIN 373	Investments	3
MATH 340	Financial Mathematics for Actuaries	3
MATH 345	Probability for Actuaries I	3
MATH 346	Probability for Actuaries II	3

Subtotal: 27

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Mathematics Major (Applied Statistics Track) – Bachelor of Science

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4

Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Math Major Core Requirements

MATH 170	Introduction to Computer Science	4
MATH 175	Calculus I	4
MATH 195	Mathematical Communication I	1
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 295	Mathematical Communication II	1
MATH 300	Introduction to Mathematical Proofs	3
MATH 301	Elementary Linear Algebra	3
MATH 308	Discrete Mathematics	3
MATH 315	Functions and Modeling	3
MATH 365	Introduction to Mathematical Statistics	3
MATH 499C	Capstone and Senior Thesis I	2
MATH 499D	Capstone and Senior Thesis II	1
UTCH 250	Perspectives on Science and Mathematics	3

Subtotal: 39

Applied Statistics Track Requirements

ETM 319	Quality and Reliability Engineering	3

Subtotal: 3

Applied Statistics Electives

Choose nine hours from the following:

MATH 355	Operations Research	3
MATH 419	Probability	3
MATH 420	Mathematical Statistics	3
MATH 453	Concepts in the Design of Experiments	3
MATH 455	Linear Statistical Models	3
MATH 456	Nonparametric Statistics	3

Subtotal: 9

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Mathematics Major (Computational Track) – Bachelor of Science

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4

Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Math Major Core Requirements

MATH 170	Introduction to Computer Science	4
MATH 175	Calculus I	4
MATH 195	Mathematical Communication I	1
MATH 275	Calculus II	4

MATH 276	Calculus III	4
MATH 295	Mathematical Communication II	1
MATH 300	Introduction to Mathematical Proofs	3
MATH 301	Elementary Linear Algebra	3
MATH 308	Discrete Mathematics	3
MATH 315	Functions and Modeling	3
MATH 365	Introduction to Mathematical Statistics	3
MATH 499C	Capstone and Senior Thesis I	2
MATH 499D	Capstone and Senior Thesis II	1
UTCH 250	Perspectives on Science and Mathematics	3
		Subtotal: 39

Computational Track Requirements

MATH 320	Information Theory and Codes	3
MATH 400	Foundations of Computability	3
PHYS 181	Introduction to Scientific Computing	3
		Subtotal: 9

Computational Track Electives

Choose one of the following:

MATH 312	Numerical Methods	3
	or	
PHYS 381	Computer Solutions to Engineering and Science Problems	3
		Subtotal: 3

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Mathematics Teaching

Mathematics Area (MSUTeach Track) – Bachelor of Science

A description of MSUTeach and specific coursework for the MSUTeach Math Track can be found in the MSUTeach Program (p. 129) section of the College of Science.

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

The student exiting the programs in the mathematical sciences will:

1. Analyze and solve problems in the areas of algebra, analysis, statistics and geometry. The student should be able to work individually and as a member of a team. Depending on the program emphasis, the student should possess the concept comprehension skills mentioned above at a sufficient level of expertise to function successfully as a teacher of mathematics, as a contributing member in business or industry, or as a graduate student pursuing an advanced degree in mathematics or statistics.
2. Use technology as an aid in the solution of problems. Specifically, the student should be able to write and effectively use programs for computers and graphing calculators.
3. Develop appropriate learning skills to foster the investigation of mathematical ideas and direct his/her own learning.
4. Communicate the mathematical ideas learned in the program to others. This ability should exist in both written and oral forms of communication.

Assessment

1. Senior capstone and thesis.
2. Survey of graduates.
3. Exit interviews.
4. Major Field Achievement Test.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Math Core Requirements

MATH 170	Introduction to Computer Science	4
MATH 175	Calculus I	4
MATH 195	Mathematical Communication I	1
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 295	Mathematical Communication II	1
MATH 300	Introduction to Mathematical Proofs	3
MATH 301	Elementary Linear Algebra	3
MATH 308	Discrete Mathematics	3
MATH 312	Numerical Methods	3
MATH 315	Functions and Modeling	3
MATH 450	Modern Algebra	3
MATH 363	Differential Equations	3
MATH 365	Introduction to Mathematical Statistics	3
MATH 410	Introduction to Real Analysis	3
MATH 499C	Capstone and Senior Thesis I	2
MATH 499D	Capstone and Senior Thesis II	1
		Subtotal: 48

MSUTeach Math Requirements

UTCH 100	Step 1: Inquiry Approaches to Teaching	1
UTCH 150	Step 2: Inquiry-Based Lesson Design	1
UTCH 200	Knowing and Learning in Mathematics and Science	3
UTCH 250	Perspectives on Science and Mathematics	3
UTCH 300	Classroom Interactions*	3
UTCH 410	Project-Based Instruction*	3
UTCH 360	Research Methods	3
UTCH 450	Apprentice Teaching	12
MATH 370	College Geometry I	3
MATH 371	College Geometry II	3
PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5
		Subtotal: 45

MSUTeach Math Electives

Choose three hours of mathematics electives above MATH 300 except MATH 305, 330, or 332 as approved by the department chair.

Subtotal: 3

Total Credit Hours: 123

Mathematics Area (MSUTeach Math with Computer Science Track) – Bachelor of Science

A description of MSUTeach and specific coursework for the MSUTeach Math with Computer Science Track can be found in the MSUTeach Program (p. 129) section of the College of Science.

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

The student exiting the programs in the mathematical sciences will:

1. Analyze and solve problems in the areas of algebra, analysis, statistics and geometry. The student should be able to work individually and as a member of a team. Depending on the program emphasis, the student should possess the concept comprehension skills mentioned above at a sufficient level of expertise to function successfully as a teacher of mathematics, as a contributing member in business or industry, or as a

graduate student pursuing an advanced degree in mathematics or statistics.

2. Use technology as an aid in the solution of problems. Specifically, the student should be able to write and effectively use programs for computers and graphing calculators.
3. Develop appropriate learning skills to foster the investigation of mathematical ideas and direct his/her own learning.
4. Communicate the mathematical ideas learned in the program to others. This ability should exist in both written and oral forms of communication.

Assessment

1. Senior capstone and thesis.
2. Survey of graduates.
3. Exit interviews.
4. Major Field Achievement Test.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Math Core Requirements

MATH 170	Introduction to Computer Science	4
MATH 175	Calculus I	4
MATH 195	Mathematical Communication I	1
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 295	Mathematical Communication II	1
MATH 300	Introduction to Mathematical Proofs	3
MATH 301	Elementary Linear Algebra	3
MATH 308	Discrete Mathematics	3
MATH 312	Numerical Methods	3
MATH 315	Functions and Modeling	3
MATH 450	Modern Algebra	3
MATH 363	Differential Equations	3
MATH 365	Introduction to Mathematical Statistics	3
MATH 410	Introduction to Real Analysis	3
MATH 499C	Capstone and Senior Thesis I	2
MATH 499D	Capstone and Senior Thesis II	1
		Subtotal: 48

MSUTeach Math with Computer Science Track Requirements

UTCH 100	Step 1: Inquiry Approaches to Teaching	1
UTCH 150	Step 2: Inquiry-Based Lesson Design	1
UTCH 200	Knowing and Learning in Mathematics and Science	3
UTCH 250	Perspectives on Science and Mathematics	3
UTCH 300	Classroom Interactions*	3
UTCH 410	Project-Based Instruction*	3
UTCH 360	Research Methods	3
UTCH 450	Apprentice Teaching	12
MATH 370	College Geometry I	3
MATH 371	College Geometry II	3
CIS 205	Introduction to Programming - C++	3
CS 303	Data Structures	3
CS 310	Algorithms and Advanced Data Structures	3
CS 380	Software Engineering	3
		Subtotal: 47

Total Credit Hours: 122

Mathematics Major (MSUTeach Track) – Bachelor of Science

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Math Major Core Requirements

MATH 170	Introduction to Computer Science	4
MATH 175	Calculus I	4
MATH 195	Mathematical Communication I	1
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 295	Mathematical Communication II	1
MATH 300	Introduction to Mathematical Proofs	3
MATH 301	Elementary Linear Algebra	3
MATH 308	Discrete Mathematics	3
MATH 315	Functions and Modeling	3
MATH 365	Introduction to Mathematical Statistics	3
MATH 499C	Capstone and Senior Thesis I	2
MATH 499D	Capstone and Senior Thesis II	1
UTCH 250	Perspectives on Science and Mathematics	3
		Subtotal: 39

MSUTeach Track Requirements

UTCH 100	Step 1: Inquiry Approaches to Teaching	1
UTCH 150	Step 2: Inquiry-Based Lesson Design	1
UTCH 200	Knowing and Learning in Mathematics and Science	3
UTCH 300	Classroom Interactions*	3
UTCH 410	Project-Based Instruction*	3
UTCH 360	Research Methods	3
MATH 450	Modern Algebra	3
MATH 370	College Geometry I	3
MATH 371	College Geometry II	3
UTCH 450	Apprentice Teaching	12
		Subtotal: 35

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Total Credit Hours: 122

Mathematics Minor

Mathematics Minor Requirements

Core Requirements

MATH 170	Introduction to Computer Science	4
MATH 175	Calculus I	4
MATH 275	Calculus II	4
		Subtotal: 12

Electives

Choose 13 credit hours from MATH 174, MATH 276, or other mathematics courses at or above the 300-level except MATH 330, MATH 332, MATH 353, and MATH 305 as approved by the department chair.

Subtotal: 13

Total Credit Hours: 25

Statistics Minor

Statistics Minor Requirements

Track 1: Noncalculus

MATH 301	Elementary Linear Algebra	3
MATH 353	Statistics	3
MATH 355	Operations Research	3
MATH 455	Linear Statistical Models	3
MATH 453	Concepts in the Design of Experiments	3
MATH 456	Nonparametric Statistics	3
		Subtotal: 18

Noncalculus Electives

MATH	Elective from 152-199 level	3
		Subtotal: 3

Track 2: Calculus

MATH 301	Elementary Linear Algebra	3
MATH 355	Operations Research	3
MATH 365	Introduction to Mathematical Statistics	3
MATH 419	Probability	3
MATH 420	Mathematical Statistics	3
MATH 453	Concepts in the Design of Experiments	3
		Subtotal: 18

Calculus Electives

Choose three hours (one course) from the following:

MATH 455	Linear Statistical Models	3
MATH 456	Nonparametric Statistics	3
		Subtotal: 3

Total Credit Hours: 21

MSUTeach Program

MSUTeach Office
102 Lloyd Cassity Building
Morehead State University
Morehead, KY 40351
Phone: 606-783-9036
msuteach@moreheadstate.edu
https://moreheadstate.edu/academics/colleges/education/msuteach/

MSUTeach is an innovative teacher preparation program that allows students to pursue secondary school teacher certification within a four-year biology, chemistry, earth science, mathematics, or physics degree program. While learning the subject matter of their majors, students also learn how to teach. Upon completing the program, students graduate with a bachelor's degree and are recommended for a secondary school teaching certificate. The MSUTeach program invites students to explore their interest in teaching as early as the freshman year. The MSUTeach program supports students in developing a strong content knowledge and the skills to follow their goals to a successful career, graduate school, or to become a highly effective and innovative teacher.

MSUTeach Requirements

The required coursework for each content area or major is described in the College of Science section of the MSU catalog under its respective program, e.g. biology, chemistry, earth science, mathematics, or physics. Each of these programs has a MSUTeach Track.

The coursework for all MSUTeach Tracks is as follows:

1. UTCH 100: Step 1: Inquiry Approaches to Teaching (1 credit hour)
2. UTCH 150: Step 2: Inquiry-Based Lesson Design (1 credit hour)

3. UTCH 200: Knowing and Learning in Mathematics and Science (3 credit hours)
4. UTCH 250: Perspectives on Science and Mathematics (3 credit hours)
5. UTCH 300: Classroom Interactions (3 credit hours)
6. UTCH 315: Functions and Modeling (3 credit hours, not required for all programs, check your major/area)
7. UTCH 360: Research Methods (3 credit hours)
8. UTCH 410: Project-based Instruction (3 credit hours)
9. UTCH 450: Apprentice Teaching (12 credit hours)

Students must meet the following requirements to enroll in UTCH 450: Apprentice Teaching:

a. Successfully completed all MSUTeach (except UTCH 450) coursework with a grade of "C" or better.
b. Successfully completed ENG 100, COMS 108, and General Education Math with a grade of "C" or better.
c. Core Academic Skills for Educators (CASE) Testing Series and/or ACT for TEP admission.
d. Passed MSUTeach preliminary portfolio.
e. Submission of MSUTeach Application for Apprentice Teaching by March 1 for Fall Apprentice Teaching or by October 1 for Spring Apprentice Teaching.
f. Completed required field experience hours in all needed categories.
g. Earned a GPA of 2.75 (on a 4-point scale, no rounding up) on all of the following:
   - Cumulative - all coursework (including transfer credit)
   - All course work completed at Morehead State University
   - All content coursework in major or area
   - All MSUTeach courses
h. Submitted scores for the appropriate Praxis II exams.
i. Candidate must have a bona fide MSUTeach content major for teacher certification.
j. Filed the results of a current physical examination including a TB risk assessment.
k. AFTER candidate is notified of his/her school placement, contact the district central office to secure information related to that district's protocol for completing a criminal background check. A criminal background check MUST be on file within the district PRIOR to clinical practice.
l. If required by the school district, candidate must follow procedures for completing a drug screening.

For further information, contact the MSUTeach Office at 606-783-9036 or your advisor.

Nursing Department

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Nursing Faculty

L. Barrett, S. Bradley, M. Buckley (Mt. Sterling Campus), C. Burchett, N. Bush, K. Clevenger (BSN Program Coordinator), K. Damron, T. Ellett (AASN Program Coordinator), T. Kennedy, L. Larson, L. Mays (Online Nursing Programs Coordinator), M. McClave (Online Faculty Liaison), H. O'Hara, L. Parsons (Chair), C. Rogers, H. Royse, S. Sadler, S. Smith-Stephens, M. Terrell, C. Thompson, H. Virgin, L. Wallace, M. A. Walters, M.S. White

Department of Nursing Undergraduate Student Handbook

The Department of Nursing Undergraduate Student Handbook is a supplement to the Morehead State University Undergraduate Catalog. The student handbook contains policies and guidelines related specifically to Morehead State University's Department of Nursing. The handbook is reviewed and revised annually, and there are policies in the student handbook that are not in the undergraduate catalog.

It is the student's responsibility to read the University Undergraduate Catalog, the Department of Nursing Undergraduate Student Handbook, and all official notices. It is the student's responsibility to abide by the regulations of the University and the guidelines and policies set forth in the Department of Nursing Student Handbook and other official notices.

Nursing – Associate of Applied Science (AAS)

Center for Health, Education and Research (CHER) Suite 201
Office: 606-783-2296

The associate degree in nursing combines general education studies and support courses with nursing theory and clinical education. The program is designed to prepare graduates for the role of the registered nurse. Graduates of the program are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). The AAS program in nursing is accredited by the Accreditation Commission for Education in Nursing, Inc., (ACEN) 3390 Peachtree Rd. NE, Suite 1400, Atlanta, GA 30326, phone 404-975-5000.

The nursing program has selective admission and enrollment is limited. In the event there are more qualified applicants than positions, students with the highest GPA will be accepted. The nursing department offers programs at the Morehead and Mt. Sterling campuses. The associate of applied sciences in nursing is a face-to-face program primarily lecturing from the Morehead campus. It is not an online program and classroom attendance is expected.

Nursing – Associate of Applied Science

Admission Criteria

The associate of applied science in nursing (AAS) has a limited enrollment on the Morehead and Mt. Sterling campuses. The following criteria are used to determine conditional acceptance to the program.

1. American College Test (ACT) Score with a mandatory minimum composite score of 20 or higher; or ATI Test for Essential Academic Skills (TEAS) examination with a mandatory minimum total score of 80% or higher.
2. Applicants must meet the following:
   a. A GPA of 3.0 or higher on a scale of 4.0 with a minimum grade of "C" in prerequisite courses required for the associate degree nursing program.
      - BIOL 234 Principles of Human Anatomy and Physiology I
      - BIOL 235 Principles of Human Anatomy and Physiology II
      - ENG 100 Writing I
      - Math Core - MATH 135 recommended (or MATH 131, MATH 152, MATH 174, MATH 175, or equivalent).
   b. Applicants with a grade less than "C" on two courses required for the AAS in nursing within the last two years from the term of application due date (last Friday in March, last Friday in October) are not eligible for admission.
   c. Applicants must have a minimum cumulative GPA of 2.0 on all work at Morehead State University.

   d. Applicants may be conditionally admitted to the program pending successful completion of prerequisite courses required for admission to the program.
3. Final acceptance will be dependent on maintaining course grades and grade point average as well as meeting CPR and health requirements by established dates. Compliance with the Technical Performance Standards is also required.
4. Clinical education is a mandatory component of the AAS. Due to accreditation requirements of the clinical education centers, students will be required to obtain a criminal background check and undergo drug testing prior to acceptance to the clinical assignment. The student is responsible for any incurred cost. Any student who fails acceptance to the clinical assignment will be unable to complete the program.
5. Licensed Practical Nurses Requesting Advanced Placement:
   a. Licensed Practical Nurses who have (1) successfully completed a Licensed Practical Nursing Program, (2) hold an active, unrestricted license as a Licensed Practical Nurse in Kentucky, and (3) obtain a minimum score of 900 on the Health Education Systems Incorporated (HESI) Fundamental Examination can apply for "K" credit for NURA 114: Fundamental Nursing Concepts - 7 hours.
   b. LPN's may attempt the HESI Fundamental Examination a maximum of two times. A six-week time frame is required between the first and second attempt. A score of 900 or greater on the Fundamentals HESI must be obtained within 6 (six) months of entry into the program.

Conditions for Enrollment

1. Students may be assigned to clinical practice areas other than those in the immediate area, requiring traveling up to 1.5 hours from the assigned campus. Transportation to and from these settings is the responsibility of the student.
2. Clinical experiences and formal lectures may be required during various hours of the day, evening and night.
3. Students have the responsibility for the costs incurred by enrollment in the nursing program. These costs include CPR, immunizations, CastleBranch (CB), CB Bridges, My Clinical Exchange (MCE), identification badges, professional malpractice insurance, personal health insurance, criminal background check, drug testing, academic materials, testing fees, clothing, and equipment.

Application Deadlines

Admission criteria and procedures are reviewed on an annual basis. It is the applicant's responsibility to verify current application criteria and procedures prior to the application deadline.

- Application for **fall** admission into the **Associate of Applied Science in nursing program** is made in the spring semester prior to fall classes. The application deadline date is the **last Friday in March.**
- Application for s**pring** admission is made in the fall semester prior to spring classes. The application deadline is the **last Friday in October**.

Program Competencies

Graduates of the Morehead State University Associate of Applied Science in Nursing degree program will have demonstrated ability to:

1. Provide and direct safe and effective client-centered care that:
   a. Protects clients and health care personnel by enhancing care delivery.
   b. Protects clients and health care personnel from health and environmental hazards.
2. Provide and direct client-centered care using health promotion and maintenance strategies that promote optimal health.
3. Provide and direct client-centered care in a manner that promotes emotional, mental and social well-being.
4. Provide and direct client-centered care that:
   a. Promotes achievement of basic care and comfort.
   b. Includes effective use of pharmacological and parenteral therapies.
   c. Reduces risk potential.
   d. Includes effective nursing care for acute, chronic and life threatening physiological alterations.

Assessment

The associate of applied science in nursing program uses a systematic plan of evaluation to evaluate and improve upon program outcomes. The standards used to evaluate the program include ACEN criteria, which includes the following standards:

1. Administrative Capacity and Resources,
2. Faculty,
3. Students,
4. Curriculum,
5. Outcomes.

Program assessment is ongoing with formative course assessment each semester and summative program assessment annually. The AAS nursing faculty participates in the development of levels of achievement for each standard, assessment methods, collection and analysis of data, as well as development and implementation of action plans.

AAS Academic Standards and Progression

Purpose

To outline for the student, academic standards to be met for progression in the associate of applied science in nursing (AAS) degree program.

Standards for Progression

The following academic standards are required for student progression in the associate degree nursing programs:

The student will:

1. Complete each required course in the curriculum with a minimum grade of "C."
2. Achieve a "C" or higher grade in nursing and general education/support courses which are required at each semester level prior to progressing to subsequent nursing courses.
3. Achieve a satisfactory rating in clinical for nursing courses with a clinical component.
4. Maintain a minimum cumulative GPA of 2.0 on all work at the University.
5. Cease to attend clinical immediately upon receiving two grades of "U" (unsatisfactory) at any time during a clinical rotation.
6. Repeat both theory and clinical components of a nursing course in which less than a "C" grade is achieved; or when the clinical component is evaluated as unsatisfactory.
7. Repeat required general education/support courses in which less than a "C" grade is achieved prior to progressing to the next nursing course.
8. If a course repeat is required, the student must submit a written request at the time of course failure to the coordinator of the AAS in Nursing program stating the desire to repeat the course. If a written statement is not received it will be considered an unofficial withdrawal from the program.
9. NURA 214 and NURA 215 are required to be taken consecutively during the final semester of the program to meet Kentucky Board of Nursing (KBN) requirements for the 120-hour direct patient care experience during the last semester of the program. In the event that a student is unsuccessful in NURA 214, NURA 215 must be repeated regardless of previous successful grade earned to fulfill 201 KAR 20:320. A student

who is unsuccessful in NURA 214 and NURA 215 will be dismissed from the program. Anecdotal Note: Kentucky Administrative Regulation KAR

10. For consideration for reinstatement in the nursing program the student may be required to complete an interview with the Admissions and Progression Committee.
11. Be reinstated in the nursing program providing:
    a. Space is available in the nursing class.
    b. Recommendation for reinstatement was made by the Admission and Progression Committee.
    c. Submission of written request for reinstatement was made.
    d. Required general education/support courses were successfully completed.
    e. Course failures have not exceeded the limits as stated below. (See #16)
12. Complete the nursing program within six semesters after initial entry into the program.
13. Transfer students who enter the program in the second semester of required courses must complete the program within five semesters.
14. Maintain current American Heart Association (AHA) cardiopulmonary resuscitation (CPR) certification for Basic Life Support for Health Care Providers.
15. Present evidence of current liability insurance coverage payment before progressing into a clinical nursing course that requires learning activities within a health care facility.
16. **Be dismissed** from the nursing program for any of the following situations after admission to the nursing program:
    a. Achievement of less than a "C" grade twice in the same course.
    b. Achievement of less than a "C" in any two required courses in the curricular sequence.
    c. Inability to complete the nursing program within six semesters after beginning the program.
    d. Inability for transfer students or LPNs who have entered the program at the second semester to complete within five semesters.
    e. Inability to transfer theory into practice.
    f. Consistent lack of understanding of his/her limitations.
    g. Inability to anticipate the consequences of action or lack of action.
    h. Consistent failure to maintain communication with faculty and staff about client care.
    i. Dishonesty about client care.
    j. Commitment of a civil/criminal act in the educational area.
    k. Breach of patient confidentiality.
    l. Impaired behavior.
    m. Academic dishonesty.
    n. Unprofessional behavior (bullying/harassment) or acts of incivility that place a client or colleague in physical or emotional jeopardy. Examples of incivility include but are not limited:
        - Using the silent treatment
        - Spreading rumors
        - Badgering or back-stabbing
        - Rude or obnoxious behavior
        - Sabotaging a project
        - Damaging someone's reputation using humiliation, put-downs, and intimidation
        - Failing to support a peer in collaborative relationships
        - Setting someone up for failure
        - Undermining of work
        - Verbal abuse
        - Public reprimands
        - Failing to follow the chain of communication (command)
        - Sarcasm
        - Destroying confidence
        - Losing one's temper or yelling at someone
        - Continual criticism
        - Encouraging others to turn against a peer
    o. Failure of acceptance to a clinical site based on denial of the clinical placement due to failure to comply with all hospital policies and procedures.
    p. Failure of acceptance to a clinical site based on unprofessional behavior.

AAS Standardized Testing Policy

Students in the associate of applied science in nursing (AAS) program will be provided with a series of online tests and remediation resources designed to evaluate and enhance the nursing knowledge of students in an undergraduate program. The tests serve as nationally normed formative and summative evaluation tools for use during the program. In addition to testing basic nursing content, these tests evaluate students' clinical judgment skills. The results enable faculty to identify at-risk students with knowledge and learning deficits in specific content areas in a timely manner so that early intervention may be provided.

In regard to remediation, following the completion of any standardized or custom examination; students who have not successfully met the course guidelines for the exam are required to be accountable for remediation by accessing their individual remediation plan via the testing website. If a student scores less than the 61% benchmark on the Kaplan standardized or custom exams, it is a requirement that they perform identified remediation activities and/or assignments as determined by faculty. This must be completed by the end of the course. It is the student’s responsibility to provide evidence of remediation by completion of the Kaplan NCLEX Integrated Test Analysis and Remediation Conference Sheet based upon the student’s identified deficiencies of the specific exam and uploading the completed document on the course Blackboard site. The contract template is available on Blackboard and is to be based on individual Kaplan score weaknesses and must be signed by both the student and the course faculty. Failure to complete a plan of remediation may negatively impact the student’s success in courses throughout the AAS curriculum as well as success in courses throughout the AAS program curriculum, as well as success on the NCLEX-RN (licensure exam).

AAS Program Requirements

A minimum 63-64 credit hours is required for the AAS degree, which includes 27-28 credit hours of general education and additional courses and 36 credit hours of nursing courses. The student will be required to complete the course sequence approved by the University and in place at the time of admission to the AAS in Nursing. The AAS in Nursing policies on challenge examination, transfer credit, academic standards and progression, and criteria for taking the National Council Licensure Examination can be obtained from the Department of Nursing.

General Education		
General Education Courses	(See Associate's Degree GNED Requirements)	21
		Subtotal: 21

Refer to the associate degree general education section (p. 29) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

AAS Core Requirements		
NURA 114	Fundamental Nursing Concepts	7
NURA 115	Nursing Care Concepts I	5
NURA 117	Maternal-Child Concepts	3
NURA 211	Mental Health Concepts	4
NURA 212	Nursing Care Concepts II	5
NURA 214	Transitional Nursing Concepts	2
NURA 215	Advanced Health Concepts	10
		Subtotal: 36
AAS Additional Requirements		
BIOL 234	Principles of Human Anatomy and Physiology I	3
BIOL 235	Principles of Human Anatomy and Physiology II	3
PSY 154	Introduction to Psychology	3
		Subtotal: 9

Total Credit Hours: 63

Nursing Department Required Course Sequence for AAS Students

Note: Program requirements that are also general education requirements will count in both places, as applicable.

AAS Course Sequence

Prior to Admission		
BIOL 234	Principles of Human Anatomy and Physiology I	3
BIOL 235	Principles of Human Anatomy and Physiology II	3
ENG 100	Writing I	3
MATH 135	Mathematics for Technical Students	3
		Subtotal: 12
First Semester		
Global Cultures Arts & Humanities (HUM)	(choose one)	3
FYS 101	First Year Seminar	3
NURA 114	Fundamental Nursing Concepts	7
		Subtotal: 13
Second Semester		
ENG 200	Writing II	3
PSY 154	Introduction to Psychology	3
NURA 115	Nursing Care Concepts I	5
NURA 117	Maternal-Child Concepts	3
		Subtotal: 14
Third Semester		
COMS 108	Fundamentals of Speech Communication	3
NURA 211	Mental Health Concepts	4
NURA 212	Nursing Care Concepts II	5
		Subtotal: 12
Fourth Semester		
NURA 214	Transitional Nursing Concepts	2
NURA 215	Advanced Health Concepts	10
		Subtotal: 12

Total Credit Hours: 63

Nursing – Bachelor of Science in Nursing (BSN)

Center for Health, Education and Research (CHER) Suite 201
Office: 606-783-2296
Fax: 606-783-9104

The Bachelor of Science in Nursing (BSN) offers a program of study that combines general education courses with professional nursing theory and clinical education. The program prepares the graduates for the role of the professional nurse and provides a foundation for graduate study. Graduates of the program are eligible to take the National Council Licensure Examination for Registered Nurses. The BSN also has a post-licensure (RN track also known as RN-BSN) component where graduates of associate degree and diploma nursing programs may pursue the baccalaureate degree. The baccalaureate nursing program at Morehead State University is accredited by the Commission on Collegiate Nursing Education (CCNE), 655 K Street NW, Suite 750, Washington, D.C. 20001, 202-887-6791. The Bachelor of Science in Nursing program is also approved by the Kentucky Board of Nursing.

BSN Program Competencies

Graduates of the BSN Pre-licensure program will be able to demonstrate the role of the professional registered nurse by:

1. Demonstrating the application of critical thinking skills through the nursing process in the planning and management of nursing care.
2. Communicating effectively in a variety of spoken, written, and technological formats.
3. Demonstrating competence, initiative, and commitment to the nursing profession.
4. Integrating current scientific knowledge, nursing theory and nursing research to deliver quality health care in accordance with the American Nurses Association (ANA) Standards of Care and Code of Ethics for Nurses.
5. Assuming leadership roles within inter-professional health care teams and the profession of nursing.
6. Providing compassionate, sensitive, spiritual and culturally appropriate nursing care for patients at any stage of the life span.
7. Analyzing global issues in the context of cultural diversity.
8. Creating a health care environment that is conducive to wellness and health promotion.

Graduates of the BSN Post-licensure program will be able to:

1. Assume a leadership role in promoting quality and compliance regarding safety and health in a complex health care environment.
2. Develop effective clinical reasoning skills utilizing evidence based guidelines.
3. Use informatics to support safe and effective patient care environments and to assist in patient and interprofessional communication.
4. Evaluate health care policy, financial and regulatory environments that impact delivery of health care services.
5. Develop effective interprofessional communication and collaboration and function effectively in interprofessional teams.
6. Promote individual and population health through health promotion and mitigation of acute and chronic illness.
7. Exhibit professional behaviors that are accountable, ethical, legal and moral.

BSN Assessment

The BSN Pre-Licensure Program uses a Systematic Plan of Evaluation to evaluate and to improve program outcomes. The standards used to evaluate the program include the Commission on Collegiate Nursing Education (CCNE) standards for accreditation as follows:

- Program Quality: Mission and Governance
- Program Quality: Institutional Commitment and Resources
- Program Quality: Curriculum and Teaching-Learning Practices

- Program Effectiveness: Assessment and Achievement of Program Outcomes.

Program assessment is ongoing with formative course assessment each semester and summative program assessment evaluation annually. The BSN Pre-Licensure Program faculty participate in the development of levels of achievement for each standard, assessment methods, collection and analysis of data as well as development and implementation of action plans.

BSN Fees and Expenses

There are fees and expenses specific to the Department of Nursing in addition to those required by the University. These fees are subject to change without prior notification. See Tuition and Fee Information (p. 13) for general university fees and expenses. See Department of Nursing Student Handbook for fees and expenses specific to the BSN program.

Nursing – Bachelor of Science in Nursing (BSN Pre-licensure)

BSN program policies on challenge examination, criteria for taking challenge exams and transfer credit can be obtained from the Department of Nursing.

BSN Pre-licensure Admission Criteria

The BSN program has a selective admission procedure. Enrollment in the program is limited. In the event there are more qualified applicants than available positions, students with the highest GPA will be accepted. Applicants to the BSN program are selected based upon the following criteria:

1. Completion of the 31 credit hours of the required pre-nursing courses:

BIOL 234	Principles of Human Anatomy and Physiology I	3
ENG 100	Writing I	3
MATH Core	general education elective	3
FYS 101	First Year Seminar	3
PSY 154	Introduction to Psychology	3
BIOL 235	Principles of Human Anatomy and Physiology II	3
COMS 108	Fundamentals of Speech Communication	3
ENG 200	Writing II	3
CHEM 101 or 111	Chemistry Elective	4
Level 3 Ethics and Civic Engagement SBS	(choose one)	3

Notes:
MATH 135 is recommended.
BIOL 234 -Level 2 NSC
CHEM 101 or 111 - Level 2 NSC
PSY 154 - Level 2 Knowledge SBS

2. ACT or TEAS

Submission of American College Test (ACT) score with a mandatory minimum composite of 20 or higher; or ATI Test for Essential Academic Skills (TEAS) Examination with a mandatory minimum total score of 80% or higher.

3. GPA

A GPA of 3.0 or above (with no rounding) based on the required 31 credits with no grade being less than a "C."

4. Minimum GPA

A minimum GPA of 2.5 or above for the following:

BIOL 234	Principles of Human Anatomy and Physiology I	3
BIOL 235	Principles of Human Anatomy and Physiology II	3
MATH 135	Mathematics for Technical Students	3

MATH 135: or equivalent

5. Eligibility

More than two failures of any two required courses within three years of application to the program will result in ineligibility for admission. Students with course failures prior to the three-year period will be considered for admission if the student has demonstrated satisfactory academic progress ("C" or above in required courses) since the course failures. Full-time study for two consecutive semesters will be required to evaluate academic status. At least two-thirds of these credit hours must be in program required general education or support courses. This policy also applies to transfer students.

6. Currently enrolled applicants

Applicants who are currently enrolled but have not yet completed the required 16 semester hours of the second semester are eligible for conditional acceptance based on midterm grades. A copy of current midterm grades must be submitted with the application packet or as soon as available after the application deadline. Final acceptance will be dependent on maintaining course grades and GPA as outlined in the above criteria.

7. Technical Performance Standards

Compliance with the Technical Performance Standards.

8. Certification

Possess current certification by American Heart Association in Basic Life Support for Health Care Providers (CPR).

9. Health Requirements

Documentation of compliance with all health requirements.

10. Criminal Background check

Documentation of criminal background check.

11. Drug Testing

Documentation of drug testing (dates scheduled by program).

12. Status Maintenance

Final acceptance to the program will be dependent on maintaining course grades and grade point average, as well as meeting CPR, health and drug testing requirements by established dates.

BSN Pre-licensure Program Application Procedure

1. Be unconditionally admitted to MSU.
2. Declare nursing as an area of study.
   a. Meet with assigned nursing faculty advisor
   b. Enroll in required pre-nursing courses as outlined in the BSN curriculum sequence.
3. Submit a completed application packet to the BSB program. The application packet includes:
   a. Completed BSN program application.
   b. Copy of high school transcript(s).
   c. GED validation if applicable.
   d. Transcript from MSU and a copy of transcripts from all universities and colleges attended, if courses not listed on MSU transcript.
   e. Nursing transfer student: in addition to the above materials must submit:
      i. University undergraduate catalog(s) if transfer credit is sought;
      ii. Syllabi for nursing course(s) to be evaluated for transfer credit; and
      iii. Written letter of recommendation from the director/coordinator of the nursing program from which the student is transferring.

f. Copy of midterm grades for spring semester if applicable.

4. Student selection process occurs during the spring semester preceding fall admission. Student selection process occurs during the fall semester preceding spring admission.
5. Students transferring from other nursing programs must follow the same admission procedure and meet the same criteria for admission. The student who has completed nursing courses in another program may be eligible for advanced placement. For consideration of placement into a spring semester of the curriculum sequence, application materials must be submitted by Sept. 1 of the preceding semester. For consideration of placement into a fall semester of the curriculum sequence, application materials must be submitted by Feb. 1 of the preceding semester.
6. The BSN program admits students twice a year to the program (Fall and Spring). Students are officially admitted to the BSN program in the fall semester of the sophomore year of the curriculum sequence or spring semester of the sophomore year of the curriculum sequence (depending on cohort admission).
7. To be considered for official admission to the pre-licensure component of the BSN program, all materials must be submitted to the address below before March 15 preceding fall admission to the program and October 15 preceding spring admission to the program:

   Academic Counseling Coordinator
   Bachelor of Science in Nursing (BSN) Program
   Department of Nursing
   Morehead State University
   Center for Health, Education and Research (CHER) Suite 201
   316 West 2nd St.
   Morehead, KY 40351

Information related to required tuition and fees may be obtained from Morehead State University, Office of Enrollment Services.

BSN Pre-licensure Program Conditions for Enrollment

1. Students may be assigned to clinical practice areas other than those in the immediate area, requiring traveling some distance from campus. Transportation to and from these settings is the responsibility of the student.
2. Clinical experiences and formal lectures may be required during various hours of the day (including weekends), evening and night.
3. Students have the responsibility for the costs incurred by enrollment in the nursing program. These costs include CPR, immunizations, CastleBranch (CB), CB Bridges, My Clinical Exchange (MCE), identification badges, professional malpractice insurance, personal health insurance, criminal background check, drug testing, academic materials, testing fees, clothing and equipment.
4. Clinical education is a mandatory component of the BSN program. Due to accreditation requirements of the clinical education centers, students will be required to obtain a criminal background check and undergo drug testing prior to acceptance of clinical assignment. The student is responsible for any incurred cost. Any student who fails acceptance to the clinical assignment will be unable to complete the program.

BSN Pre-licensure Program Requirements

General Education		
General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

BSN Pre-licensure Core Requirements		
NURB 260	Concepts of Health and Wellness in Nursing	3
NURB 261	Clinical Judgment	3
NURB 262	Foundational Skills for Professional Nursing	6
NURB 264	Family Health Nursing	6
NURB 266	Community-Based Nursing Care	5
NURB 316	Pathophysiology for Nursing Practice	4
NURB 318	Pharmacology and the Nursing Process	3
NURB 320	Care of Older Adults	5
NURB 322	Mental Health Nursing	4
NURB 324	Acute Alterations in Adult Health I	7
NURB 326	Advanced Health Assessment	3
NURB 361	Introduction to Nursing Research	3
NURB 420	Acute Alterations in Adult Health II	7
NURB 422	Chronic Alterations in Health	5
NURB 424	Public Health	3
NURB 461	Nursing Leadership and Management	3
NURB 498	Nursing Senior Seminar	3
NURB 499C	Advanced Nursing Practicum	3
		Subtotal: 76

BSN Pre-licensure Supplemental Requirements		
BIOL 217	Elementary Medical Microbiology	4
BIOL 234	Principles of Human Anatomy and Physiology I	3
BIOL 235	Principles of Human Anatomy and Physiology II	3
CHEM 101 or 111	Chemistry Elective	4
MATH 353	Statistics	3
PSY 154	Introduction to Psychology	3
		Subtotal: 20

The student will be required to complete the course sequence approved by the University and in place at the time of admission into the BSN program. Admissions procedures, curriculum requirements and course sequencing may be changed as part of the process of annual program evaluation. It is the applicant's responsibility to verify current application criteria and procedures prior to the application deadline.

Total Credit Hours: 120

Academic Standards and Progression (BSN Pre-licensure)

Purpose

To outline for students, standards to meet for progression in the baccalaureate nursing program.

Standards for Progression (BSN Pre-licensure)

1. Complete each required course in the required curriculum with a minimum grade of "C."
2. Achieve a minimum grade of "C" in nursing, general education and/or support courses at each semester level prior to progressing to subsequent nursing courses.
3. Achieve a satisfactory in clinical for nursing courses with a clinical component.
4. Cease to attend clinical immediately upon receiving two grades of "U" (Unsatisfactory) at any time during a clinical rotation.
5. Repeat both theory and clinical components of a nursing course in which less than a "C" grade is achieved; or when the clinical component is evaluated as unsatisfactory.
6. Repeat required nursing course/general education/support courses in which less than a "C" grade is achieved prior to progressing to the next nursing course.

7. Maintain 2.0 total cumulative GPA in order to continue in nursing program.
8. Complete the nursing program within five years after official acceptance into the program.
9. Maintain compliance with immunization requirements.
10. Maintain compliance with technical performance standards.
11. Present evidence of having current certification in basic cardiopulmonary resuscitation (CPR) for health care providers by the American Heart Association before progressing to a clinical nursing course that requires patient/student interaction.
12. Present evidence of current liability insurance coverage payment before progressing into a clinical nursing course that requires learning activities within a health care facility.
13. Present evidence of professional treatment prior to registering for subsequent nursing courses in the event that there is evidence of emotional instability or drug or alcohol abuse that could affect the ability to provide safe nursing care (Please refer to the Department of Nursing Drug Screening Policy located within the student handbook for further details).
14. Adhere to the following guidelines with respect to deficiencies:
    a. Students who perform below 900 on any custom or nationally normed standardized examination, are required to meet with the course leader to develop a HESI Remediation Plan of Action. A HESI Remediation Plan of Action must be developed, initiated, and completed successfully by the last official day of the semester in order to progress to the next nursing course. If a student scores less than 900 on a HESI exam, it is a progression requirement that they perform identified remediation activities and/or assignments as outlined in the HESI Testing & Remediation Policy. HESI Remediation Plans of Action are graded as Pass/Fail. Therefore, it is the student's responsibility to provide evidence of successful completion of remediation and to schedule a conference with the course faculty. If the student does not take these steps or does not complete the HESI Remediation Plan of Action as outlined, their lack of action will result in the grade of an "E" for the course. This will impact the student's ability to progress and may result in not only course failure, but dismissal from the BSN program depending on the number course failures the student has obtained.
    b. In the event of having to repeat a nursing course or required support course, the student must submit a written request at the time of course failure to the Coordinator of BSN Program stating the desire to repeat the course. This statement must be received no later than one week after the registrar's office has released the grades to the student's Self-Service account. If a written statement is not received it will be considered an unofficial withdrawal from the program. (See Resumption of Program Policy for details regarding statement).
    c. All courses repeated due to failure to achieve a course grade of "C" or above will be counted in determining the number of course failures.
    d. Students who are unsuccessful in a course are considered an out of sequence student if they have not exceeded more than one course failure. Out of sequence students who are eligible to resume programming may register for the course they were unsuccessful in for the subsequent semester. Students who register to resume programming for the subsequent semester will not be required to take a HESI resumption exam(s). However, students who opt not to resume programming during the subsequent semester, and opt to resume the following semester (e.g. should resume programming in spring semester but opts to wait until fall semester to resume), will be required to take a standardized HESI exam(s) (at cost to student) to show that they have maintained currency with previously learned course content/skills. Students will have one opportunity to test (the week prior to the start of the desired re-entry semester) and will be required to achieve a score of a 900 on the standardized HESI exam(s). During the time students are considered out of sequence, students are strongly encouraged to remediate on previous deficiencies identified on all custom/standardized HESI exams taken during the program and any additional deficiencies identified during program course work in order to successfully complete the re-entry custom/standardized exam(s). See table below for information regarding custom/standardized exams to be administered:

Course Failure	Exam Administered Prior to Return	Required Score
NURB 264, NURB 266, or NURB 316	Fundamentals	900
NURB 318, NURB 320, or NURB 322	Fundamentals	900
NUR 324, NURB 326, or NURB 361	Mid-curricular	900
NURB 420, NURB 422, or NURB 424	Mid-curricular & Medical Surgical Custom	900
NURB 461, NURB 498, or NURB 499C	Mid-curricular & Comprehensive Medical Surgical	900

Note: If a student is successful in all NURB courses, but fails a required support course, or takes a LOA, the student will still be required to take the standardized exam(s) that corresponds to the semester the courses above were required if they do not return in the subsequent semester.

    e. Students will be required to complete an additional background check prior to the start of the semester if a student has not been continuously enrolled in the program.
    f. Students will be required to complete a random drug screen. Date will be provided by the program.
    g. Out of sequence students who do not register/return to repeat the course in which they were unsuccessful in and sit out for one semester will be required to schedule a time with faculty one week prior to the start of the reentry semester to satisfactorily perform random skills checkoff(s).
    h. With successful completion of the above requirements and providing space is available within the class, the student will be eligible to re-enter the BSN. If the student is not successful with the requirements above, the student will not be eligible for readmission to program.
    i. All courses repeated due to failure to achieve a course grade of "C" or above will be counted in determining the number of course failure.
15. Be dismissed from the nursing program for any of the following situations after admission to the nursing program:
    a. Achievement of less than a "C" grade twice in the same course.
    b. Achievement of less than a "C" in any two required courses in the program curricular sequence.
    c. Inability to complete the nursing program within five years after beginning the program.
    d. Placing a patient in extreme emotional or physical jeopardy.
16. The Department of Nursing and the BSN expects students to conduct themselves in a professional manner that is in accordance with the Code of Ethics for Nursing. The Code of Ethics for Nurses serves as a guide for carrying out nursing responsibilities in a manner consistent

with quality in nursing care and the ethical obligations of the profession. A student demonstrating any of the following will be dismissed from the program prior to the end of the semester:

a. Inability to transfer theory into practice.
b. Consistent lack of understanding of his/her limitations.
c. Inability to anticipate the consequences of action or lack of action.
d. Consistent failure to maintain communication with faculty and staff about client care.
e. Dishonesty about client care.
f. Commitment of a civil/criminal act in the educational area.
g. Breach of patient confidentiality.
h. Impaired behavior.
i. Academic dishonesty.
j. Unprofessional behavior or acts of incivility (bullying/harassment) that place a client or colleague in physical or emotional jeopardy. Examples of incivility include, but are not limited:
   - using the silent treatment;
   - spreading rumors;
   - badgering or back-stabbing;
   - rude or obnoxious behavior;
   - sabotaging a project;
   - damaging someone's reputation;
   - using humiliation, put-downs, and intimidation;
   - failing to support a peer in collaborative relationships;
   - setting someone up for failure;
   - undermining of work;
   - verbal abuse;
   - public reprimands;
   - sarcasm;
   - destroying confidence;
   - losing one's temper or yelling at someone;
   - continual criticism; and
   - encouraging others to turn against a peer.
k. Failure of acceptance to a clinical site based on denial of the clinical placement due to failure to comply with all hospital policies and procedures.
l. Failure of acceptance to a clinical site based on unprofessional behavior.

Resumption of Program Policy (BSN Pre-licensure)

PURPOSE: To outline the requirements to be met when normal program sequencing is interrupted by the student.

DEFINITION: Students who do not complete the Bachelor of Science in Nursing Program in six consecutive semesters are considered “out of sequence.” Students may be out of sequence because of elective program interruption or course failure.

Required courses taken when the student is out of sequence will be counted toward graduation requirement whether the student voluntarily interrupted the program or was required to interrupt the program for course failure. Required courses that are failed while the student is out of sequence will be counted in total course failures as explained in Academic Standards and Progression Policy.

ELECTIVE PROGRAM INTERRUPTION:

1. A student may elect to interrupt the sequence of the nursing program with permission of the program coordinator for one of the following:
   a. Leave of Absence-student may request a leave of absence from the nursing program for one year for personal reasons.
   b. Withdrawal from one nursing course - students may elect withdraw from a nursing course one time during the program.
2. A student who is out of program sequence related to interruptions outlined in #1 above will be automatically enrolled into the appropriate nursing course(s) providing:
   a. A written statement of intent to remain in the nursing program was submitted to the program coordinator prior to the interruption (See attached form at the end of this policy). This statement must be received no later than one week after the Registrar’s office has released the grades to the student’s Self-Service Account. If a written statement is not received it will be considered an unofficial withdrawal from the program.
   b. Space is available in the appropriate nursing class.
   c. Students who elect to interrupt program sequencing by taking a leave of absence or withdrawal from a nursing course will be considered an out of sequence student if they have not exceeded more than one course failure. Out of sequence students who are eligible to resume programming may register for the course they were enrolled in at the time they elected to take a program leave of absence or course withdrawal in the subsequent semester. Students who register to resume programming for the subsequent semester will not be required to take a HESI resumption exam(s). However, students who opt not to resume programming during the subsequent semester, and opt to resume the following semester (e.g. should resume programming in spring semester but opts to wait until fall semester to resume), will be required to take a standardized HESI exam(s) (at cost to student) to show that they have maintained currency with previously learned course content/skills. Students will have one opportunity to test (the week prior to the start of the desired re-entry semester) and will be required to achieve a score of a 900 on the standardized HESI exam(s). During the time students are considered out of sequence, students are strongly encouraged to remediate on previous deficiencies identified on all custom/standardized HESI exams taken during the program and any additional deficiencies identified during program course work in order to successfully complete the re-entry custom/standardized exam(s). See table below for information regarding custom/standardized exams to be administered:

NURB 264, NURB 266, or NURB 316	Fundamentals	900
NURB 318, NURB 320, or NURB 322	Fundamentals	900
NUR 324, NURB 326, or NURB 361	Mid-curricular	900
NURB 420, NURB 422, or NURB 424	Mid-curricular & Medical Surgical Custom	900
NURB 461, NURB 498, or NURB 499C	Mid-curricular & Comprehensive Medical Surgical	900

**Note: If a student is successful in all NURB courses, but fails a required support course or takes a LOA, the student will still be required to take the standardized exam(s) that corresponds to the semester the courses above were required.*

HESI Testing & Remediation Policy (BSN Pre-licensure)

Purpose

To outline HESI testing and remediation requirements in the Bachelor of Science in Nursing (BSN) program curriculum for individuals enrolled.

Requirements

Health Education Systems Incorporated (HESI) examinations are nationally standardized and/or custom examinations that are content-specific and are based on the National Council of State Boards of Nursing (NCSBN) Testing Blueprint. Customized examinations are based on BSN course outcomes and end of program outcomes. HESI's online examinations test students on their skills in clinical application and clinical judgement; both of which are cornerstones of BSN student preparation. HESI examinations are utilized throughout the curriculum within the BSN program, from admission through the capstone course. HESI provides an individualized detailed remediation plan for the students regarding their specific areas of weakness. Remediation is the process of identifying the need to take action to help remedy a situation, that if left unresolved, may result in unfavorable outcomes. Whereas implementing intervention strategies may help to successfully address the situation and improve outcomes (Culleiton, 2009).

Following the administration of a HESI custom/specialty and/or exit examination, students are required to remediate based on their individual HESI examination score. Students with lower HESI scores require more intense remediation, whereas students with higher HESI scores require less remediation. HESI examination scores are indicative of a student's success in the program and on their NCLEX examination for licensure.

Students who perform below 900 on any custom or nationally normed standardized examination, must complete a HESI Remediation Plan of Action (as listed in the HESI Testing & Remediation Policy) based on their individual HESI exam score(s).

The HESI Remediation Plan of Action must be developed, initiated, and completed successfully by the last official day of the semester in order to progress to the next nursing course. Students will also complete a HESI Remediation Plan of Action Contract (contract template will be made available to the student) that will outline their individual plan. This document will be signed by both the student and the course faculty.

If a student scores less than 900 on any HESI exam, it is a progression requirement (see Academic Standards & Progression Policy) that they perform the identified remediation activities and/or assignments as outlined in the HESI Testing & Remediation Policy and HESI Remediation Plan of Action. HESI Remediation Plans of Action are graded as Pass/Fail. Therefore, it is the student's responsibility to provide evidence of successful completion of remediation and to schedule a conference with the course faculty. If the student does not take these steps or does not complete the HESI Remediation Plan of Action as outlined, their lack of action will result in the grade of an "E" for the course. This will impact the student's ability to progress and may result in not only course failure, but dismissal from the BSN program depending on the number of course failures the student has obtained.

Reference: Culleiton, A.L. (2009). Remediation: A closer look in an educational context. Teaching & Learning in Nursing, 4, 22-27.

Use of HESI Testing & Remediation across the Bachelor of Science in Nursing Curriculum

Course	HESI Exam	How HESI Exam is Utilized	Requirement for Remediation
NURB 262	Admission HESI	Identify areas of weakness on prerequisite content.	Admission HESI: Any student scoring below 76% or below in any content area.
	Custom Fundamentals and/or HESI Specialty RN Fundamental Exam	Exam grade based upon conversion percentage score	Any student scoring less than 900 on any HESI exam.
NURB 264	Custom Peds/OB and/or HESI Specialty RN Maternity/Pediatrics	Exam grade based upon conversion percentage score	Any student scoring less than 900 on any HESI exam.
NURB 266	Custom Community and/or HESI Specialty RN Community Health	Exam grade based upon conversion percentage score	Any student scoring less than 900 on any HESI exam.
NURB 316	Custom Pathophysiology and/or HESI Specialty RN Pathophysiology	Exam grade based upon conversion percentage score	Any student scoring less than 900 on any HESI exam.
NURB 318	Custom Pharmacology and/or HESI Specialty RN Pharmacology	Exam grade based upon conversion percentage score	Any student scoring less than 900 on any HESI exam.
NURB 320	Custom Mid-curricular	Exam grade based upon conversion percentage score	Any student scoring less than 900 on any HESI exam.
NURB 322	Custom Mental Health and/or HESI Specialty RN Psychology/Mental Health	Exam grade based upon conversion percentage score	Any student scoring less than 900 on any HESI exam.
NURB 324	Custom Adult Med-Surg.	Exam grade based upon conversion percentage score	Any student scoring less than 900 on any HESI exam.
NURB 326	Custom Health Assessment and/or HESI Specialty RN Health Assessment	Exam grade based upon conversion percentage score	Any student scoring less than 900 on any HESI exam.
NURB 420	Custom Comprehensive Med-Surg. and/or HESI Specialty RN Medical Surgical	Exam grade based upon conversion percentage score	Any student scoring less than 900 on any HESI exam.
NURB 422	Custom Chronic	Exam grade based upon conversion percentage score	Any student scoring less than 900 on any HESI exam.
NURB 461	Custom Leadership/ Management and/or HESI Specialty RN Management	Exam grade based upon conversion percentage score	Any student scoring less than 900 on any HESI exam.
NURB 498	Any Custom and/or HESI Standardized Specialty RN Exam (Fundamentals,	Exam grade based upon conversion	Any student scoring less than 900 on

	Pediatrics/Maternity Community, Pathophysiology, Mid-curricular, Pharmacology, Health Assessment, Medical Surgical, Chronic Management, RN Exit, etc.)	percentage score	any HESI exam.
NURB 499C	Custom HESI Exit Exam(s), along with any and/or HESI Specialty RN Exit, along with any and/or all standardized or custom HESI exams (Fundamentals, Pediatrics/ Maternity, Community, Mid-curricular, Pathophysiology, Pharmacology, Health Assessment, Mental Health, Medical Surgical, Chronic, Management, etc.)	Exam grade based upon conversion percentage score	Any student scoring less than 900 on any HESI exam.
		*HESI examinations will also be utilized for development of remediation plans in all courses.	

Additional Information Concerning HESI Testing & Remediation

Faculty may administer any standardized or custom HESI examination associated with their course. Standardized and custom HESI exam scores will be added to the grade book. Remediation associated with both the standardized and custom HESI exam(s) will be required and will follow the same guidelines. Note that faculty in NURB 499c may administer multiple exams from any standardized or custom HESI examinations from the following areas: fundamentals, pediatrics/maternity, community, pathophysiology, mid-curricular, pharmacology, mental health, health assessment, medical surgical, chronic alterations, management, & RN-Exit.

HESI Remediation Plan of Action

HESI Score	
900 or above	1. Remediation is encouraged, but optional. Consider completing at least on packet to reinforce your learning of content in a particular area. 2. You are required to complete the HESI Remediation Contract Form.
800-899	1. You are required to complete all Essential packets generated by HESI Next Gen Remediation. Minimum of five (5) hours of study is required. HESI Dashboard reporting student activity will be reviewed. 2. PrepU Quizzing: Create ten (10) ten item quizzes based on content from your top Essential packets generated by HESI and obtain required mastery score (See Note Section for Mastery Score Breakdown). You will need to continue to take quizzes until mastery score is obtained. 3. Select one (1) *Evolve HESI Case Study* in a content area of weakness based on your HESI Exam Student Report and obtain 100%. 4. Other as recommended by faculty (as applicable).
700-799	1. You are required to complete all *Essential* packets generated by HESI Next Gen Remediation). Minimum of six (6) hours of study required. HESI Dashboard reporting student activity will be reviewed. 2. PrepU Quizzing: Create twelve (12) ten item quizzes based on content from your top *Essential* packets generated by HESI and obtain required mastery score (See Note Section for Mastery Score Breakdown). You will need to continue to take quizzes until mastery score is obtained. 3. Select two (2) *Evolve HESI Case Studies* in a content area of weakness based on your *HESI Exam Student Report* and obtain 100%. 4. Complete correlating *HESI Practice Exam* (time spent on exam will be reviewed); see course faculty for further details. Practice exam test scores will not be added to the grade book. 5. Other as recommended by faculty (as applicable).
Below 700	1. You are required to complete **ALL** Essential packets generated by HESI Next Gen Remediation). Minimum of 8 hours of study is required. HESI Dashboard reporting student activity will be reviewed. 2. PrepU Quizzing: Create fifteen (15) ten item quizzes based on content from your top Essential packets and obtain required mastery score (See Note Section for Mastery Score Breakdown). You will need to continue to take quizzes until mastery score is obtained. 3. Select three (3) Evolve HESI Case Study in a content area of weakness based on your HESI Exam Student Report and obtain 100%. 4. Complete correlating HESI Practice Exam (time spent on exam will be reviewed); see course faculty for further details. Practice exam test scores will not be added to the grade book. 5. Other as recommended by faculty (as applicable).
Note:	**HESI Student Access** Students must be logged into their HESI Student Access account and the online test in order to access specific remediation content for the number of hours specified. Do not print and log out of HESI remediation to study. Time spent in remediation content will be monitored. Creating and printing study packets will not count as completing remediation. Students must spend time studying the material as directed. Only the time spent under the online remediation will count towards the required remediation hours. Students may break up the required remediation into multiple sessions. Students are required to access all their *Essential* packets according to the description above; access and review the online remediation; review specialty/sub specialty areas, quick book review; in depth book review; view and submit practice questions in each area that is in the HESI remediation packet if applicable; view and submit case studies if applicable (within HESI Remediation or as directed within Evolve); view multimedia if applicable. **PrepU** PrepU quizzing is developed based on a student's content areas of weakness and their current levels of mastery.

	Required PrepU mastery level per quiz is as follows: NURB 262 = Mastery Level 5 NURB 264 = Mastery Level 6 NURB 266 = Mastery Level 6 NURB 318 = Mastery Level 8 NURB 320 = Mastery Level 8 NURB 322 = Mastery Level 8 NURB 324 = Mastery Level 8 NURB 420 = Mastery Level 8 NURB 422 = Mastery Level 8 NURB 461 = Mastery Level 8 NURB 498 = Mastery Level 8 NURB 499 = Mastery Level 8

**Note: Policy subject to change.*

2/25/22 BSN Faculty/kc; 8/12/20 BSN Faculty/kc; May 2019 BSN Faculty/kc; 5/9/14/ BSN Faculty/kc; 1/7/14 BSN Faculty/kc; 6/26/12 BSN Faculty/kc

Nursing – Bachelor of Science in Nursing (BSN Post-licensure)

BSN Post-licensure Program Application Procedures

1. Be unconditionally admitted to MSU.
2. Declare nursing as the area and meet with assigned nursing faculty advisor.
3. Submit required materials listed below to the Baccalaureate Nursing Program by the last Friday in March for admission into the fall semester or the last Friday in October for admission into the spring semester:
   a. Completed Department of Nursing application.
   b. Transcripts from MSU and all universities/colleges attended if courses not listed on MSU transcript.
   c. Nursing transfer student: in addition to the above materials must submit:
      i. University undergraduate catalog(s) if transfer credit is sought;
      ii. Syllabi for nursing course(s) to be evaluated for transfer credit; and
      iii. Letter of recommendation from the director/coordinator of the nursing program from which the student is transferring.
   d. Validation of current Kentucky registered nursing licensure.
   e. Validation of current American Heart Association certification in Basic Life Support for Health Care Providers (CPR).
   f. Verification of professional malpractice insurance.

Send required application materials to:

Regional Academic Counseling Coordinator
BSN Post-licensure Track Component
Department of Nursing
Morehead State University
Center for Health, Education and Research (CHER) Suite 201
Morehead, KY 40351

BSN Post-licensure Program Admission Criteria

Students must hold an active and unrestricted license to practice as a registered nurse (RN).

BSN Post-licensure Program Conditions for Enrollment

1. Students have the responsibility for the costs incurred by enrollment in the nursing program. These costs include CPR certification, immunizations, health insurance, professional malpractice insurance, criminal background check(s), drug testing, academic materials, testing fees, clothing and equipment.
2. Clinical education is a mandatory component of the BSN. Due to accreditation requirements of the clinical education centers, students will be required to obtain a criminal background check and/or undergo drug testing prior to acceptance of clinical assignment. The student is responsible for any incurred cost. Any student who fails acceptance to the clinical assignment will be unable to complete the program.

BSN Post-licensure Program Competencies

Graduates of the Bachelor of Science in Nursing Post-licensure Program will have demonstrated the ability to:

1. Assume a leadership role in promoting quality and compliance regarding safety and health in a complex health care environment.
2. Develop effective clinical reasoning skills utilizing evidence based guidelines.
3. Use informatics to support safe and effective patient care environments and to assist in patient and interprofessional communication.
4. Evaluate health care policy, financial and regulatory environments that impact delivery of health care services.
5. Develop effective interprofessional communication and collaboration and function effectively in interprofessional teams.
6. Promote individual and population health through health promotion and mitigation of acute and chronic illness.
7. Exhibit professional behaviors that are accountable, ethical, legal and moral.
8. Integrate knowledge and methods from a variety of disciplines, human growth and development, pathophysiology and pharmacology to promote effective clinical reasoning in the provision of client centered care.

BSN Post-licensure Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

BSN Post-licensure Program Requirements

NURS	Electives 300-level or above	9
NURS 349	Pharmacology	3
NURB 309	Health Care Delivery Systems	3
NURB 314	Health Assessment in Nursing	3
NURB 327	Transitions to Professional Nursing Practice	4
NURB 406	Evidence-Based Practice	3
NURB 407	Population Health	4
NURB 408	Quality Improvement in Nursing	3
NURB 409	Leadership in Nursing	4
NURB 421	Nursing Synthesis Practicum	3
NURB 499D	Nursing Synthesis	3
		Subtotal: 42

BSN Post-licensure Program Qualifying Requirements

BIOL 234	Principles of Human Anatomy and Physiology I	3
BIOL 235	Principles of Human Anatomy and Physiology II	3
MATH 353	Statistics	3
BIOL 336	Pathophysiology	4
		Subtotal: 13

Free Electives

Associate or Certificate Degree elective hours will be included in credit toward the degree, but not part of the academic evaluation. These elective hours are completed during pre-licensure nursing programming.

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Academic Standards and Progression (BSN Post-licensure Program)

Purpose

To outline for students, standards to meet for progression in the baccalaureate nursing program.

Standards for Progression (BSN Post-licensure Program)

1. Complete each required course in the required curriculum with a minimum grade of "C."
2. Achieve a satisfactory in clinical for nursing courses with a clinical component.
3. Cease to attend clinical immediately upon receiving two unsatisfactory grades ("U") at any time during a clinical rotation.
4. Repeat both theory and clinical components of a nursing course in which less than a "C" grade is achieved; or when the clinical component is evaluated as unsatisfactory.
5. Repeat required nursing course/general education/support courses in which less than a "C" grade is achieved prior to progressing to the next nursing course.
6. Maintain 2.0 total cumulative GPA in order to continue in nursing program.
7. Complete the nursing program within five years after official acceptance into the program.
8. Maintain compliance with immunization requirements.
9. Maintain compliance with technical performance standards.
10. Present evidence of having current certification in basic cardiopulmonary resuscitation (CPR) for health care providers by the American Heart Association before progressing to a clinical nursing course that requires patient/student interaction.
11. Present evidence of current liability insurance coverage payment before progressing into a clinical nursing course that requires learning activities within a health care facility.
12. Present evidence of professional treatment prior to registering for subsequent nursing courses in the event that there is evidence of emotional instability or drug or alcohol abuse which could affect the ability to provide safe nursing care (Please refer to the Department of Nursing Drug Screening Policy located within the student handbook for further details).
13. Adhere to the following guidelines with respect to deficiencies:
    a. In the event of having to repeat a nursing course or required support course, the student must submit a written request at the time of course failure to the coordinator of the Post-licensure Nursing Program stating the desire to repeat the course. This statement must be received no later than one week after the registrar’s office has released the grades to the student’s Self-Service account. If a written statement is not received it will be considered an unofficial withdrawal from the program. (See Resumption of Program Policy for details regarding statement.)
    b. All courses repeated due to failure to achieve a course grade of "C" or above will be counted in determining the number of course failures.
14. Be dismissed from the nursing program for any of the following situations after admission to the nursing program:
    a. Achievement of less than a "C" grade twice in the same course.
    b. Achievement of less than a "C" in any two required courses in the program curricular sequence.
    c. Inability to complete the nursing program within five years after beginning the program.
    d. Placing a patient in extreme emotional or physical jeopardy.
15. The Department of Nursing and the Post-licensure Baccalaureate Nursing Program expects students to conduct themselves in a professional manner that is in accordance with the Code of Ethics for Nursing. The Code of Ethics for Nurses serves as a guide for carrying out nursing responsibilities in a manner consistent with quality in nursing care and the ethical obligations of the profession. A student demonstrating any of the following will be dismissed from the program **prior** to the end of the semester:
    a. Inability to transfer theory into practice.
    b. Consistent lack of understanding of his/her limitations.
    c. Inability to anticipate the consequences of action or lack of action.
    d. Consistent failure to maintain communication with faculty and staff about client care.
    e. Dishonesty about client care.
    f. Commitment of a civil/criminal act in the educational area.
    g. Breach of patient confidentiality.
    h. Impaired behavior.
    i. Academic dishonesty.
    j. Unprofessional behavior (bullying/harassment) or acts of incivility that place a client or colleague in physical or emotional jeopardy. Examples of incivility include, but are not limited:
        - using the silent treatment;
        - spreading rumors;
        - badgering or back-stabbing;
        - rude or obnoxious behavior;
        - sabotaging a project;
        - damaging someone's reputation;
        - using humiliation, put-downs, and intimidation;
        - failing to support a peer in collaborative relationships;
        - setting someone up for failure;
        - undermining of work;
        - verbal abuse;
        - public reprimands;
        - sarcasm;
        - destroying confidence;
        - losing one's temper or yelling at someone;
        - continual criticism; and
        - encouraging others to turn against a peer.
    k. Failure of acceptance to a clinical site based on denial of the clinical placement due to failure to comply with all hospital policies and procedures.
    l. Failure of acceptance to a clinical assignment based on the criminal background check requirement.
    m. Failure of acceptance to a clinical site based on unprofessional behavior.

Nursing – Bachelor of Science in Nursing (Post-Licensure RN to MSN Track)

BSN Post licensure RN MSN Track Admission Requirements

1. Students must hold an active and unrestricted license to practice as a registered nurse (RN).
2. Students may apply to the RN-MSN Track after completing the following courses if they have a GPA of 2.8 or higher. Please note: a minimum of 3.0 is required to enter the MSN Program.
   a. General Education (minimum 33 hours)
   b. BSN Post-Licensure Program Qualifying Requirements (BIOL 234, BIOL 235, MATH 353, BIOL 336)
   c. Associate or Certificate Degree Elective Hours - These elective hours will be included in credit toward the degree but not part of the academic evaluation. These elective hours are completed during pre-licensure nursing programming.
   d. BSN Post-licensure Program Requirements - Nursing Courses (NURS 349, NURB 327, NURB 309, NURB 314)
3. Students may apply to the Graduate School and the MSN Program after completing a minimum of 9 hours of NURB 400-level courses.

MSN Program Admission Requirements

1. General admission to graduate study.
2. Cover letter/goal statement (1-2 pages in length, typed, double-spaced) for the MSN/FNP program to include your background description, reasons for wanting to attend the nursing graduate program and a description of post-graduation goals.
3. Current copy of resume or curriculum vita to include minimum information of RN licensure (state(s) and number, educational preparation and experience background.
4. Official transcript with bachelor's or master's degree in nursing from an accredited program (CCNE, ACEN, CNEA).
5. GPA of 3.0 or higher on 4.0 scale of undergraduate or graduate degree.
6. ESL/international students will have a minimum TOEFL score of 550, computer-based test score of 173 and internet-based score of 70.

Additional Admission Requirements (completed through the Department of Nursing)

1. Complete criminal background check
2. Meet departmental immunization requirements
3. Three professional references from persons in a position to evaluate the applicant's success in a graduate nursing program; at least one to be completed by immediate or up line supervisor; others to be completed by a professional colleague or university faculty who are familiar with the candidate's work.
4. Minimum one-year clinical experience as a registered nurse (RN) -2080 hours
5. Completion of a three credit hour descriptive statistics course at the graduate or undergraduate level

Additional RN-MSN Track Application Procedures

1. Be admitted to the BSN Post-Licensure Program.
2. Complete all general education and 300-level courses required by program.
3. Complete at least 9 hours of 400-level courses required by program.
4. Have a GPA of 2.8 or higher in required courses. Please note: A minimum GPA of 3.0 is required to enter the MSN program.

Additional MSN Application Procedures

1. Application to the Graduate School and the MSN Program can be made when admitted to the RN-MSN Track and at least 9 hours of 400-level courses required by the BSN Post-licensure Program have been completed.

Granting of the Baccalaureate of Science in Nursing Degree

1. Granting of the BSN degree will be made with successful completion of the RN-MSN Track requirements, with or without progression into the MSN program.

BSN Post-Licensure (RN-MSN Track) Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

BSN Post-licensure (RN-MSN Track) Program Core

NURB 309	Health Care Delivery Systems	3
NURB 314	Health Assessment in Nursing	3
NURB 327	Transitions to Professional Nursing Practice	4
NURS 349	Pharmacology	3
NURB 406	Evidence-Based Practice	3
NURB 407	Population Health	4
NURB 408	Quality Improvement in Nursing	3
NURB 409	Leadership in Nursing	4
NURB 421	Nursing Synthesis Practicum	3
NURB 499D	Nursing Synthesis	3
		Subtotal: 33

BSN Post-licensure Program Qualifying Requirements

BIOL 234	Principles of Human Anatomy and Physiology I	3
BIOL 235	Principles of Human Anatomy and Physiology II	3
BIOL 336	Pathophysiology	4
MATH 353	Statistics	3
		Subtotal: 13

RN-MSN Track Requirements

NURG 610	Health Assessment for Advanced Practice	3
NURG 613	Pathophysiology for Advanced Practice	3
NURG 630	Health Promotion and Disease Prevention	3
		Subtotal: 9

Free Electives

Associate or Certificate Degree elective hours will be included in credit toward the degree, but not part of the academic evaluation. These elective hours are completed during pre-licensure nursing programming.

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Physics, Earth Science, and Space Systems Engineering Department

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Affiliates
P. Clark (Star Theater Director), M. Combs (engineer affiliate), J. Garcia (engineer affiliate), E. Jensen (Visiting Asst. Professor), B. Malphrus (faculty affiliate), J. Samson (MSU research affiliate), K. Romig (MSU research affiliate)

Geosciences

Geosciences Area (Geology Track) – Bachelor of Science

The track in geology is intended for students who desire rigorous, broad-based preparation in most of the subdisciplines within geology. This program is strongly recommended for students who wish to attend graduate school in a geoscience area.

Program Competencies

The student will be able to:

1. Identify Earth materials (minerals, rocks, fossils, sediments, soils, etc.).
2. Map and correlate bodies of rock, sediment and soil using surface and subsurface data.
3. Articulate the physical processes that shape Earth's surface and interior.
4. Apply knowledge of modern geologic processes to interpret the geologic record.
5. Describe methods used to explore for and develop mineral/petroleum/water resources.
6. Assess the suitability of sites for the construction of buildings, roads, dams, landfills, septic systems, waste lagoons, etc.
7. Describe methods used to monitor, reclaim, and remediate sites impacted by mining, improper waste disposal, leaking underground storage tanks, etc.
8. Recognize existing or potential geologic hazards.
9. Describe the details of the inter-relationships between components (atmosphere, hydrosphere, lithosphere, biosphere) of the Earth System.

Assessment

1. Graduating seniors will be given discipline-specific exit exam(s).
2. Alumni will be surveyed regarding employment, acceptance to graduate school, or for other employment outcomes.
3. Student results in the capstone (either ESS 499C or ESS 499D) will be tracked to verify that integration of discipline skills is attained.
4. Individual measures from classes will be recorded and tracked via WEAVE.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Core Requirements

ESS 108	Physical Geology	4
ESS 201	Historical Geology	3
ESS 276	Geologic Field Methods and Ground Truthing	3
ESS 325	Earth Structure and Tectonics	4
ESS 330	Geographic Information Systems (GIS) I	3
ESS 350	Geomorphology	3
ESS 390	Environmental and Hydrogeology	4
ESS 440	Biogeochemical Cycles	3
BIOL 155	Environmental Biology	3
CHEM 111	Principles of Chemistry I	4
MATH 174, 175, or 275	(choose one)	3-4
PHYS 201	Elementary Physics I	4
PHYS 202	Elementary Physics II	4
CS 170	Introduction to Computer Science	4
ESS 499C or 499D	Geosciences Senior Thesis	3
		Subtotal: 52

Geology Track Requirements

ESS 315	Sedimentation and Stratigraphy	4
ESS 331	Geographic Information Systems (GIS) II	3
ESS 362	Mineralogy	4
ESS 363	Petrology	4
ESS 381	Economic and Energy Geology	4
CHEM 112	Principles of Chemistry II	4
ESS	Electives	6
		Subtotal: 29

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Geosciences Area (MSUTeach Track) – Bachelor of Science

A description of MSUTeach and specific coursework for the Geosciences MSU Teach Track can be found in the MSUTeach Program (p. 129) section of the College of Science.

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
    a. ENG 100 – Writing I

b. Mathematics General Education Requirement, as required by program
c. COMS 108 – Fundamentals of Speech Communication
d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

The student will be able to:

1. Identify Earth materials (minerals, rocks, fossils, sediments, soils, etc.).
2. Articulate the physical processes that shape Earth's surface and interior.
3. Apply knowledge of modern geologic processes to interpret the geologic record.
4. Recognize existing or potential geologic hazards.
5. Describe the details of the inter-relationships between components (atmosphere, hydrosphere, lithosphere, biosphere) of the Earth System.
6. Develop learning techniques to adapt to new vocational and educational situations, i.e. be able to self-educate in new applied areas and keep up with progress in the field.
7. Develop enough self-confidence, personal independence and understanding of scientific methods to carry out a technical project on one's own with only consultant-style help.
8. Read technical literature with good comprehension.
9. Write technical reports in a clear and logical way.
10. Present oral reports on technical material in a clear and logical way.
11. Be able to retrieve any needed information from scientific literature.
12. Analyze laboratory data for its correctness and locate probable sources of error, including an understanding of standard statistical tests and the concepts of error and uncertainty, and an understanding of the advantages and limitations of current instrumental and other laboratory techniques.

Assessment

1. Graduating seniors will be given discipline-specific exit exam(s).
2. Alumni will be surveyed regarding employment, acceptance to graduate school, or for other employment outcomes.
3. Student results in the capstone (either ESS 499C or ESS 499D) will be tracked to verify that integration of discipline skills is attained.
4. Individual measures from classes will be recorded and tracked via WEAVE.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Core Requirements

ESS 108	Physical Geology	4
ESS 201	Historical Geology	3
ESS 276	Geologic Field Methods and Ground Truthing	3
ESS 325	Earth Structure and Tectonics	4
ESS 330	Geographic Information Systems (GIS) I	3
ESS 350	Geomorphology	3
ESS 390	Environmental and Hydrogeology	4
ESS 440	Biogeochemical Cycles	3
BIOL 155	Environmental Biology	3
CHEM 111	Principles of Chemistry I	4
MATH 174, 175, or 275	(choose one)	3-4
PHYS 201	Elementary Physics I	4
PHYS 202	Elementary Physics II	4
CS 170	Introduction to Computer Science	4
ESS 499C or 499D	Geosciences Senior Thesis	3
		Subtotal: 52

MSUTeach Track

ASTR 125	Astronomical and Physics Methods to Explore the Universe	3
ASTR 130	Stars, Galaxies and Cosmology	3
ESS 303	Planetary Geology	3
ESS 340	Oceans and Atmospheres	3
UTCH 100	Step 1: Inquiry Approaches to Teaching	1
UTCH 150	Step 2: Inquiry-Based Lesson Design	1
UTCH 200	Knowing and Learning in Mathematics and Science	3
UTCH 250	Perspectives on Science and Mathematics	3
UTCH 300	Classroom Interactions*	3
UTCH 360	Research Methods	3
UTCH 410	Project-Based Instruction*	3
UTCH 450	Apprentice Teaching	12
		Subtotal: 41

Total Credit Hours: 120

Geology Minor

Geology Minor Requirements

Core Requirements

ESS 108	Physical Geology	4
ESS 201	Historical Geology	3
		Subtotal: 7

Electives

ESS	Electives approved by advisor	14
		Subtotal: 14

Total Credit Hours: 21

Physics

A degree in physics opens a wide variety of possibilities to a graduate.

- Students planning to attend graduate school in physics should follow requirements from any one of the following: Physics Major (Professional Physics Track), Physics Area (Astrophysics Track), Physics Area (Computational Physics Track).
- Students desiring careers as professional physicists in industry, or in eventually pursuing graduate work in engineering or related fields, should follow requirements listed from any one of the following: Physics Major (Applied Physics Track), Physics Area (Engineering Physics Electrical Track), Physics Area (Engineering Physics Mechanical Track).
- Students interested in a career in secondary physics teaching should choose the Physics Area (MSUTeach Track).

Physics Area (Astrophysics Track) – Bachelor of Science

The Bachelor of Science in Physics - Astrophysics Track helps to prepare students who wish to pursue a graduate-level degree in physics and astrophysics and will be applying for admission to graduate schools in physics in those fields. This program combines rigorous upper level courses in advanced topics in astrophysics (with an emphasis on connections to concepts seen in core physics classes) along with numerous opportunities to pursue research projects with faculty members. The main goal of this program is to provide students with both a broad base of knowledge regarding currently active fields in modern astrophysics coupled with extensive experience in research, thus making the students very competitive for admission into graduate programs.

Program Competencies

Students will:

1. Develop enough learning techniques to adapt to new vocational and educational situations, i.e. be able to self-educate in new applied areas and keep up with progress in the field.
2. Develop enough self-confidence, personal independence and understanding of scientific methods to carry out a technical project on one's own with only consultant-style help.
3. Read technical literature with good comprehension.
4. Write technical reports in a clear and logical way.
5. Present oral reports on technical material in a clear and logical way.
6. Be able to retrieve any needed information from the scientific literature.
7. Analyze laboratory data for its correctness and locate probable sources of error, including an understanding of standard statistical tests and the concepts of error and uncertainty, and an understanding of the advantages and limitations of current instrumental and other laboratory techniques.
8. Be able to use the basic principles of physics as presented in the first-year class in a wide variety of contexts, especially the relationship force to motion. Be able to relate scientific principles to observed behavior.
9. Comprehend the major concepts of Newtonian analysis of motion, energy and momentum conservation, rotational motion, electric and magnetic fields and optics, including interference.
10. Analyze and interpret astrophysical data, in particular understand how these data were obtained and calibrated.

Assessment

1. Force Concept Inventory.
2. Capstone Presentation.
3. Research Project Knowledge Scores.
4. Research Presentation Communication Scores.
5. Research Paper Scores.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Physics Core Requirements

CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 301	Elementary Linear Algebra	3
MATH 363	Differential Equations	3
PHYS 105	Introduction to Physics and Engineering Professions	1
PHYS 181	Introduction to Scientific Computing	3
PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5
PHYS 340	Experimental Physics	3
PHYS 353	Modern Physics I	4
PHYS 354	Modern Physics II	3
PHYS 381	Computer Solutions to Engineering and Science Problems	3
PHYS 497	Senior Research 1	3
PHYS 498	Senior Research II	2
		Subtotal: 54

Astrophysics Track Requirements

ASTR 112	Introductory Astronomy	3
ASTR 303	Solar System Astrophysics	3
ASTR 311	Astrophysics I: Stars and Stellar Evolution	3
ASTR 312	Astrophysics II: Galaxies and Cosmology	3
ASTR 325	Observational Astronomy Techniques	3
PHYS 332	Electricity and Magnetism I	3
PHYS 333	Electricity & Magnetism II	3
PHYS 412	Light and Physical Optics	3
PHYS 483	Classical Mechanics	4
PHYS 493	Quantum Mechanics	3
		Subtotal: 31

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Physics Area (Computational Physics Track) – Bachelor of Science

Program Competencies

Students will:

1. Develop enough learning techniques to adapt to new vocational and educational situations, i.e. be able to self-educate in new applied areas and keep up with progress in the field.
2. Develop enough self-confidence, personal independence and understanding of scientific methods to carry out a technical project on one's own with only consultant-style help.
3. Read technical literature with good comprehension.
4. Write technical reports in a clear and logical way.
5. Present oral reports on technical material in a clear and logical way.
6. Be able to retrieve any needed information from the scientific literature.
7. Analyze laboratory data for its correctness and locate probable sources of error, including an understanding of standard statistical tests and the concepts of error and uncertainty, and an understanding of the advantages and limitations of current instrumental and other laboratory techniques.
8. Be able to use the basic principles of physics as presented in the first-year class in a wide variety of contexts, especially the relationship force to motion. Be able to relate scientific principles to observed behavior.
9. Comprehend the major concepts of Newtonian analysis of motion, energy and momentum conservation, rotational motion, electric and magnetic fields and optics, including interference.

Assessment

1. Force Concept Inventory.
2. Capstone Presentation.
3. Research Project Knowledge Scores.
4. Research Presentation Communication Scores.
5. Research Paper Scores.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Physics Core Courses

CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 301	Elementary Linear Algebra	3
MATH 363	Differential Equations	3
PHYS 105	Introduction to Physics and Engineering Professions	1
PHYS 181	Introduction to Scientific Computing	3
PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5
PHYS 340	Experimental Physics	3
PHYS 353	Modern Physics I	4
PHYS 354	Modern Physics II	3
PHYS 381	Computer Solutions to Engineering and Science Problems	3
PHYS 497	Senior Research 1	3
PHYS 498	Senior Research II	2
		Subtotal: 54

Computational Physics Track Requirements

CIS 205	Introduction to Programming - C++	3
CS 170	Introduction to Computer Science	4
CS 303	Data Structures	3
CS 310	Algorithms and Advanced Data Structures	3
CS 430	Machine Learning	3
PHYS 332	Electricity and Magnetism I	3
PHYS 333	Electricity & Magnetism II	3
PHYS 417	Physics of Quantum Computing	3
PHYS 483	Classical Mechanics	4
PHYS 493	Quantum Mechanics	3
		Subtotal: 32

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Physics Area (Engineering Physics Electrical Track) – Bachelor of Science

Program Competencies

Students will:

1. Develop enough learning techniques to adapt to new vocational and educational situations, i.e. be able to self-educate in new applied areas and keep up with progress in the field.
2. Develop enough self-confidence, personal independence and understanding of scientific methods to carry out a technical project on one's own with only consultant-style help.
3. Read technical literature with good comprehension.
4. Write technical reports in a clear and logical way.
5. Present oral reports on technical material in a clear and logical way.
6. Be able to retrieve any needed information from the scientific literature.
7. Analyze laboratory data for its correctness and locate probable sources of error, including an understanding of standard statistical tests and the concepts of error and uncertainty, and an understanding of the advantages and limitations of current instrumental and other laboratory techniques.
8. Be able to use the basic principles of physics as presented in the first-year class in a wide variety of contexts, especially the relationship force to motion. Be able to relate scientific principles to observed behavior.
9. Comprehend the major concepts of Newtonian analysis of motion, energy and momentum conservation, rotational motion, electric and magnetic fields and optics, including interference.

Assessment

1. Force Concept Inventory.
2. Capstone Presentation.
3. Research Project Knowledge Scores.
4. Research Presentation Communication Scores.
5. Research Paper Scores.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements

that are also general education requirements will count in both places (as applicable).

Area Requirements

Physics Core Courses

CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 301	Elementary Linear Algebra	3
MATH 363	Differential Equations	3
PHYS 105	Introduction to Physics and Engineering Professions	1
PHYS 181	Introduction to Scientific Computing	3
PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5
PHYS 340	Experimental Physics	3
PHYS 353	Modern Physics I	4
PHYS 354	Modern Physics II	3
PHYS 381	Computer Solutions to Engineering and Science Problems	3
PHYS 497	Senior Research 1	3
PHYS 498	Senior Research II	2
		Subtotal: 54

Engineering Physics (Electrical) Track Requirements

EEC 241	Circuit Analysis	3
EEC 242	Principles of Electronic Communications	3
EEC 342	Electronic Devices and Circuits	3
EMM 203	Computer Aided Design I	3
MATH 353	Statistics	3
PHYS 211	Circuits	4
PHYS 332	Electricity and Magnetism I	3
PHYS 333	Electricity & Magnetism II	3
PHYS 361	Fundamentals of Electronics	3
PHYS 411	Thermodynamics	3
PHYS 412	Light and Physical Optics	3
		Subtotal: 34

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Physics Area (Engineering Physics Mechanical Track) – Bachelor of Science

Program Competencies

Students will:

1. Develop enough learning techniques to adapt to new vocational and educational situations, i.e. be able to self-educate in new applied areas and keep up with progress in the field.
2. Develop enough self-confidence, personal independence and understanding of scientific methods to carry out a technical project on one's own with only consultant-style help.
3. Read technical literature with good comprehension.
4. Write technical reports in a clear and logical way.
5. Present oral reports on technical material in a clear and logical way.
6. Be able to retrieve any needed information from the scientific literature.
7. Analyze laboratory data for its correctness and locate probable sources of error, including an understanding of standard statistical tests and the concepts of error and uncertainty, and an understanding of the advantages and limitations of current instrumental and other laboratory techniques.
8. Be able to use the basic principles of physics as presented in the first-year class in a wide variety of contexts, especially the relationship force to motion. Be able to relate scientific principles to observed behavior.
9. Comprehend the major concepts of Newtonian analysis of motion, energy and momentum conservation, rotational motion, electric and magnetic fields and optics, including interference.

Assessment

1. Force Concept Inventory.
2. Capstone Presentation.
3. Research Project Knowledge Scores.
4. Research Presentation Communication Scores.
5. Research Paper Scores.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Physics Core Courses

CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 301	Elementary Linear Algebra	3
MATH 363	Differential Equations	3
PHYS 105	Introduction to Physics and Engineering Professions	1
PHYS 181	Introduction to Scientific Computing	3
PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5
PHYS 340	Experimental Physics	3
PHYS 353	Modern Physics I	4
PHYS 354	Modern Physics II	3
PHYS 381	Computer Solutions to Engineering and Science Problems	3
PHYS 497	Senior Research 1	3
PHYS 498	Senior Research II	2
		Subtotal: 54

Engineering Physics (Mechanical) Track Requirements

EMM 186	Manufacturing Processes I	3
EMM 203	Computer Aided Design I	3
EMM 303	Mechanics of Materials	3
ETM 260	Thermal and Fluid Systems	3
MATH 353	Statistics	3
PHYS 221	Statics	3
PHYS 361	Fundamentals of Electronics	3
PHYS 411	Thermodynamics	3
PHYS 412	Light and Physical Optics	3
PHYS 483	Classical Mechanics	4
		Subtotal: 31

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Physics Area (MSUTeach Track) – Bachelor of Science

A description of MSUTeach and specific coursework for the MSUTeach Physics Track can be found in the MSUTeach Program (p. 129) section of the College of Science.

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

Students will:

1. Develop enough learning techniques to adapt to new vocational and educational situations, i.e. be able to self-educate in new applied areas and keep up with progress in the field.
2. Develop enough self-confidence, personal independence and understanding of scientific methods to carry out a technical project on one's own with only consultant-style help.
3. Read technical literature with good comprehension.
4. Write technical reports in a clear and logical way.
5. Present oral reports on technical material in a clear and logical way.
6. Be able to retrieve any needed information from the scientific literature.
7. Analyze laboratory data for its correctness and locate probable sources of error, including an understanding of standard statistical tests and the concepts of error and uncertainty, and an understanding of the advantages and limitations of current instrumental and other laboratory techniques.
8. Be able to use the basic principles of physics as presented in the first-year class in a wide variety of contexts, especially the relationship force to motion. Be able to relate scientific principles to observed behavior.
9. Comprehend the major concepts of Newtonian analysis of motion, energy and momentum conservation, rotational motion, electric and magnetic fields and optics, including interference.

Assessment

1. Force Concept Inventory.
2. Capstone presentation.
3. Research project knowledge scores.
4. Research presentation communication scores.
5. Research paper scores.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Physics Core Courses

CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 301	Elementary Linear Algebra	3
MATH 363	Differential Equations	3
PHYS 105	Introduction to Physics and Engineering Professions	1
PHYS 181	Introduction to Scientific Computing	3
PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5
PHYS 340	Experimental Physics	3
PHYS 353	Modern Physics I	4
PHYS 354	Modern Physics II	3
PHYS 381	Computer Solutions to Engineering and Science Problems	3
PHYS 497	Senior Research 1	3
PHYS 498	Senior Research II	2
		Subtotal: 54

MSUTeach Physics Track Requirements

PHYS 412	Light and Physical Optics	3
UTCH 100	Step 1: Inquiry Approaches to Teaching	1
UTCH 150	Step 2: Inquiry-Based Lesson Design	1
UTCH 200	Knowing and Learning in Mathematics and Science	3
UTCH 250	Perspectives on Science and Mathematics	3
UTCH 300	Classroom Interactions*	3
UTCH 315	Functions and Modeling	3
UTCH 360	Research Methods	3
UTCH 410	Project-Based Instruction*	3
UTCH 450	Apprentice Teaching	12
		Subtotal: 35

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Physics Major (Applied Physics Track) – Bachelor of Science

Program Competencies

Students will:

1. Develop enough learning techniques to adapt to new vocational and educational situations, i.e. be able to self-educate in new applied areas and keep up with progress in the field.
2. Develop enough self-confidence, personal independence and understanding of scientific methods to carry out a technical project on one's own with only consultant-style help.
3. Read technical literature with good comprehension.
4. Write technical reports in a clear and logical way.
5. Present oral reports on technical material in a clear and logical way.
6. Be able to retrieve any needed information from the scientific literature.
7. Analyze laboratory data for its correctness and locate probable sources of error, including an understanding of standard statistical tests and the concepts of error and uncertainty, and an understanding of the advantages and limitations of current instrumental and other laboratory techniques.
8. Be able to use the basic principles of physics as presented in the first-year class in a wide variety of contexts, especially the relationship force to motion. Be able to relate scientific principles to observed behavior.
9. Comprehend the major concepts of Newtonian analysis of motion, energy and momentum conservation, rotational motion, electric and magnetic fields and optics, including interference.

Assessment

1. Force Concept Inventory.
2. Capstone Presentation.
3. Research Project Knowledge Scores.
4. Research Presentation Communication Scores.
5. Research Paper Scores.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

Physics Major Core Requirements

CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 363	Differential Equations	3
PHYS 105	Introduction to Physics and Engineering Professions	1
PHYS 181	Introduction to Scientific Computing	3
PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5
PHYS 340	Experimental Physics	3
PHYS 353	Modern Physics I	4
PHYS 354	Modern Physics II	3
PHYS 361	Fundamentals of Electronics	3
PHYS 412	Light and Physical Optics	3
PHYS 497	Senior Research 1	3
PHYS 498	Senior Research II	2
		Subtotal: 54

Applied Physics Track Requirements

(intended for students who wish to pursue careers or graduate/professional studies other than physics)

PHYS 350	Nuclear Science	4
PHYS 381	Computer Solutions to Engineering and Science Problems	3
PHYS 411	Thermodynamics	3
PHYS 417	Physics of Quantum Computing	3
		Subtotal: 13

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Physics Major (Professional Physics Track) – Bachelor of Science

Program Competencies

Students will:

1. Develop enough learning techniques to adapt to new vocational and educational situations, i.e. be able to self-educate in new applied areas and keep up with progress in the field.
2. Develop enough self-confidence, personal independence and understanding of scientific methods to carry out a technical project on one's own with only consultant-style help.
3. Read technical literature with good comprehension.
4. Write technical reports in a clear and logical way.
5. Present oral reports on technical material in a clear and logical way.
6. Be able to retrieve any needed information from the scientific literature.
7. Analyze laboratory data for its correctness and locate probable sources of error, including an understanding of standard statistical tests and the concepts of error and uncertainty, and an understanding of the

advantages and limitations of current instrumental and other laboratory techniques.

8. Be able to use the basic principles of physics as presented in the first-year class in a wide variety of contexts, especially the relationship force to motion. Be able to relate scientific principles to observed behavior.
9. Comprehend the major concepts of Newtonian analysis of motion, energy and momentum conservation, rotational motion, electric and magnetic fields and optics, including interference.

Assessment

1. Force Concept Inventory.
2. Capstone Presentation.
3. Research Project Knowledge Scores.
4. Research Presentation Communication Scores.
5. Research Paper Scores.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4

Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

Physics Major Core Requirements

CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 363	Differential Equations	3
PHYS 105	Introduction to Physics and Engineering Professions	1
PHYS 181	Introduction to Scientific Computing	3
PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5
PHYS 340	Experimental Physics	3
PHYS 353	Modern Physics I	4
PHYS 354	Modern Physics II	3
PHYS 361	Fundamentals of Electronics	3
PHYS 412	Light and Physical Optics	3
PHYS 497	Senior Research 1	3
PHYS 498	Senior Research II	2

Subtotal: 54

Professional Physics Track Requirements

(intended for students who wish to pursue graduate studies in Physics)

PHYS 332	Electricity and Magnetism I	3
PHYS 333	Electricity & Magnetism II	3
PHYS 483	Classical Mechanics	4
PHYS 493	Quantum Mechanics	3

Subtotal: 13

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Pre-Engineering

Faculty Advisor: J. Birriel

All engineering schools require specific general education courses in the social sciences and humanities. A list of MSU courses that meet the University of Kentucky University Studies requirements is available from the pre-engineering advisor. Students transferring to other engineering schools should contact their advisors before selecting specific courses.

Engineering Three-Two Program (Dual Degree)

The student completes three years (96 hours), which includes the courses listed in the Two-Two Program of study and the MSU bachelor's degree requirements before transferring to an engineering college to complete the final two years of specialty. Upon completing work at both schools, the student receives dual degrees: a Bachelor of Science from Morehead State University and a Bachelor of Science in Engineering from the college of engineering.

Each 3-2 student must choose either the applied physics major and a minor, or one of the following areas of concentration: engineering physics (mechanical or electrical) or computational physics. In addition, the student must complete all MSU general education requirements prior to transfer. Students wishing to complete the 3-2 program should work with the pre-engineering advisor to choose the appropriate major/minor or area of concentration to ensure that the requirements for both degrees are met.

Many employers of engineers are interested in dual-degree graduates because of their stronger science and mathematics problem solving skills, their better communication skills, and their broader liberal arts training. Dual degree holders are better prepared to solve unusual engineering problems and to deal with the ethical and social impact of engineering activities.

Engineering Two-Two Program (Transfer)

The student spends two years of study in pre-engineering at MSU and then transfers to a college of engineering to complete a Bachelor of Science in an engineering field.

Two-Two Program Requirements

General Education

	General Education courses	variable

Subtotal: 16

All engineering schools require specific general education courses in the social sciences and humanities. A list of the MSU courses which meet the University of Kentucky University Studies requirements is available from the pre-engineering advisor. Students transferring to other engineering schools should contact their advisors before selecting specific courses.

Required:

CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
COMS 108	Fundamentals of Speech Communication	3
ENG 100	Writing I	3
ENG 200	Writing II	3
MATH 175	Calculus I	4
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 363	Differential Equations	3
PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5

Select two courses from the following:

PHYS 221	Statics	3
PHYS 411	Thermodynamics	3

Subtotal: 32

Subtotal: 48

Astrophysics Minor

Astrophysics Minor Requirements

Core Requirements

ASTR 125	Astronomical and Physics Methods to Explore the Universe	3
ASTR 130	Stars, Galaxies and Cosmology	3
ASTR 311	Astrophysics I: Stars and Stellar Evolution	3
ASTR 312	Astrophysics II: Galaxies and Cosmology	3
PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5
MATH 175	Calculus I	4
MATH 275	Calculus II	4
		Subtotal: 30

Electives

Choose one course from the following:

ASTR 324	Radio Astronomy	3
ASTR 399	Special Topics	1-6
ASTR 403	Astrophysical Instrumentation and Payloads	3
ASTR 431	Space Plasma Physics	3
ASTR 460	High Energy Astrophysics	3
ESS 303	Planetary Geology	3
PHYS 350	Nuclear Science	4
PHYS 399	Special Class	1-6
PHYS 412	Light and Physical Optics	3
		Subtotal: 3-4

Total Credit Hours: 33-34

Note: Students in the Physics Area - Astrophysics Track may not add the Astrophysics minor to their program.

Physics Minor

Physics Minor Requirements

Core Requirements

PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5
PHYS 350	Nuclear Science	4
		Subtotal: 14

Electives

PHYS	electives approved by advisor	7
		Subtotal: 7

At least 50 percent of the coursework in the major, area or minor in physics must be taken in residency.

Please note that MATH 275 must be taken as a prerequisite or corequisite of PHYS 231. Thus, any student who wishes to obtain a Physics Minor must have already taken MATH 275 or be able to take MATH 275 during the same semester that PHYS 231 is taken.

Total Credit Hours: 21

Space Systems Engineering

The Bachelor of Science in Space Systems Engineering is one of distinctively few programs nationwide offered at the undergraduate level. The presence of the 21-meter space tracking antenna and radio telescope on campus and the availability of the extraordinary facilities in the Space Science Center for our students and faculty for instruction and research provide a solid foundation for the program. Excellent faculty with diverse backgrounds in space related science and technology allow students to tap the full potential of our state-of-the-art facilities. Graduates from the program will have a breadth of knowledge, experience, skills and adaptability - the marketable tools of new and exciting professional careers in space science, aerospace and the telecommunications industry.

The main goal of this program is to prepare graduates for professional opportunities in applied technologies such as astronautical engineering, space system development and testing, satellite tracking and telemetry, and telecommunications electronics. The program provides a broad but sound education in the basic physical and mathematical sciences, as well as specialized instruction in astronomy, astrophysics, electronics, space systems and satellite technology. Research opportunities in astrophysics, space systems, engineering, engineering technology, and telecommunications are also available through the space systems engineering program. Graduates of this program will be particularly well qualified to seek positions with NASA, aerospace companies, public and private science organizations, research facilities, colleges, and in other commercial industries.

Space Systems Engineering Area – Bachelor of Science

The Bachelor of Science in Space Systems Engineering is an interdisciplinary degree program and requires students to complete requirements in physics, mathematics, electricity-electronics-telecommunications technology and astronomy-space science.

Program Competencies

The student will:

1. Develop the basic competencies in system engineering and gain familiarity with the concepts and technologies associated with aerospace systems requirements, particularly spacecraft and related subsystems.
2. Learn how to use basic laboratory instrumentation and acquire skills that permit a rapid start in practical "real world" applications in the workplace.
3. Understand issues common to all radio frequency based communications systems, specify relevant system components, participate in design trade studies, perform field/laboratory work at the engineering technologist level, prepare technical reports including studies and analyses and have sufficient preparation to be able to quickly assimilate new technical information.
4. Be prepared to enter the workforce as an entry-level systems engineer or engineering technologist with the ability to integrate the knowledge gained in coursework with the necessary skills of self-direction and research/project implementation.
5. Have an understanding of semiconductor physics, atomic bonding, and crystal structures and imperfections that ultimately dictate the physical and mechanical properties of the materials. Students will also be familiar with processes leading to materials failure, such as thermal, radiative, erosive and corrosive degradations, as well as the corresponding protection approaches as related to the extreme conditions of the space environment.
6. Become familiar with a variety of government and commercial professional opportunities in addition to those in the space industry. These include opportunities in commercial satellite services, space commercial transportation services, space tourism, direct-to-home television, GPS telecommunications, electronics, technical marketing, electronics instrumentation and defense technologies.

Assessment

1. Performance on the senior research or design project.
2. Performance in individual courses.
3. Acceptance rates into job market and/or graduate school.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Space Systems Engineering Core

SSE 105	Introduction to Electronic Processes	3
SSE 120	Satellites and Space Systems I	3
SSE 122	Satellites and Space Systems II	3
SSE 210	Spacecraft Mechanical Systems	3
SSE 315	RF Transmission Lines and Circuit Concepts	3
SSE 320	Spacecraft Electronic Systems	3
SSE 340	Digital Control Systems for Space Applications	4
SSE 341	Solid-State Electronic Devices & Applications	3
SSE 360	Advanced Space Systems	3
SSE 370	Flight Software Systems	3
SSE 442	RF/Microwave Systems & Antennas	3
SSE 444	Satellite Communications	3
SSE 445	Space Systems Communications Laboratory	1
SSE 464	Astrodynamics	3
SSE 475	Rocket Propulsion	3
SSE 498	Senior Design Project I	2
SSE 499C	Senior Design Project II	3
		Subtotal: 49

Additional Program Requirements

CHEM 111	Principles of Chemistry I	4
EEC 400	Digital Signal Processing I	3
ETM 307	Materials Science	3
MATH 175	Calculus I	4
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 312	Numerical Methods	3
MATH 363	Differential Equations	3
PHYS 211	Circuits	4
PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5
		Subtotal: 42

SSE Program Electives

Select a minimum of two credits from the following:

ASTR 311	Astrophysics I: Stars and Stellar Evolution	3
ASTR 324	Radio Astronomy	3
ASTR 431	Space Plasma Physics	3
ASTR 460	High Energy Astrophysics	3
ESS 303	Planetary Geology	3
PHYS 332	Electricity and Magnetism I	3
PHYS 361	Fundamentals of Electronics	3
SSE 399	Selected Topics	1-4
SSE 476	Directed Research	1-6
		Subtotal: 2

Total Credit Hours: 120

Integrated Science Minor

Integrated Science Minor Requirements

A total of 24 credit hours in biological and physical sciences including:

BIOL electives at 171 and above; and electives with ASTR, CHEM, ESS or PHYS prefixes, with at least two courses at 201 or above.

A minimum of 11 hours must be in eligible BIOL electives and a minimum of 11 hours must be in eligible CHEM, ESS or PHYS electives.

Total Credit Hours: 24

Psychology Department

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Faculty

J. Blackledge, G. Corso (Chair), L. Haller, S. Kidwell, G. Remillard, I. White, W. White

Psychology Programs

The Department of Psychology offers bachelor degree programs for students interested in human behavior, cognitive processes and neuroscience. These programs include:

- **B.S. - Neuroscience Area** (p. 152)**:** This program is designed for students interested in the relation between behavior/cognitive processes and the underlying nervous system structures.
- **B.S. - Psychology Area** (p. 153)**:** This program provides a strong foundation in psychology, but it also provides for additional training in specialized areas of psychology. This program would be applicable for students interested in continuing their psychology education in graduate school.
- **B.S. - Psychology Major** (p. 154)**:** This program provides a strong foundation for students interested in human behavior and cognitive processes while also offering students the opportunity to minor or double major in other STEM (Science, Technology, Engineering and Mathematics) areas.
- **B.A. - Psychology Major** (p. 155)**:** This program is designed for students interested in human behavior and cognitive processes while also offering students the opportunity to minor or double major in non-STEM areas. This program would be applicable for students interested in law school.

The Department of Psychology also offers a psychology minor (p. 155) for those students who have an interest in psychology.

Neuroscience Area - Bachelor of Science

Program Competencies

1. Acquire depth of knowledge in neuroscience
2. Apply knowledge of neuroscience
3. Develop critical thinking and scientific thinking skills
4. Develop oral and written communication skills
5. Promote brain health in the community

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Core Requirements

NEUR 121	Introduction to Brain and Behavior	3
NEUR 223	Brain Development and Sex Differences	3
NEUR 321	Aging Brain	3
NEUR 421	Behavioral Neuroscience	3
NEUR 465	Drugs and Behavior	3
PSY 281	Psychological Research Methods	3
PSY 282	Psychological Statistics	3
PSY 499C	Systems and Theories of Psychology	3
		Subtotal: 24

Neuroscience Electives

Behavioral, Social, and Health

at least 6, no more than 16

HLTH 206	Principles of Nutrition	3
HLTH 418	Use and Abuse of Drugs	3
NUTR 201	Principles of Nutrition	3
PHED 315	Motor Development and Motor Learning	3
PHIL 303	Ethics	3
PSY 380	Cognitive Psychology	3
PSY 384	Sensation and Perception	3
PSY 390	Psychology of Personality	3
PSY 422	Comparative Psychology	3
PSY 450	Abnormal Psychology	3
PSY 456	Introduction to Clinical Psychology	3
PSY 469	Counseling Psychology	3
PSY 471	Addiction Therapies	3
PSY 486	Motivation	3
PSY 489	Psychology of Learning	3
RSCI 110	Introduction to Radiological Sciences	1
SWK 470	Introduction to Substance Use Disorder Counseling	3
		Subtotal: 6

Biological and Chemical

at least 6, no more than 16

BIOL 171	Principles of Biology	4
BIOL 244	Human Anatomy and Physiology I	4
BIOL 245	Human Anatomy and Physiology II	4
BIOL 304	Genetics	3
BIOL 317	Principles of Microbiology	4
BIOL 380	Cell Biology	3
BIOL 385	Neurobiology	3
BIOL 424	Immunology	3
BIOL 425	Animal Physiology	3
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
CHEM 301	Fundamentals of Biochemistry	4
CHEM 326	Organic Chemistry I	4
CHEM 327	Organic Chemistry II	4
		Subtotal: 6

Physical and Computational

at least 6, no more than 16

CIS 214	Introduction to Programming - Java	3
CIS 305	Advanced Programming-C++	3
CS 170	Introduction to Computer Science	4
EMM 215	Computer Aided Design II	3
EEC 141	Fundamentals of Electric Circuits	3
EMM 170	Fundamentals of Robotics	3
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 353	Statistics	3
PHYS 201	Elementary Physics I	4
PHYS 202	Elementary Physics II	4
PHYS 361	Fundamentals of Electronics	3
		Subtotal: 6

Additional Electives

Choose from electives above, not to exceed 16 hours total in each category.

Subtotal: 14

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Psychology Area – Bachelor of Science

Program Competencies

Students should:

1. Understand the complexity of human and animal behavior and the influence of psychological, biological and social factors on behavior.
2. Be competent in psychological research methods including experimental design, data analysis and presentation, report writing and computer utilization.
3. Understand the methods and knowledge base of six core content areas of psychology.
4. Understand the principle tenets and major theoretical characteristics of major systems in psychology.

Additional competencies for the Psychology Area include one or more of the following:

1. Develop additional knowledge of specialized research areas of psychology.
2. Develop additional knowledge and skills in psychological research design and analysis.
3. Develop practical and theoretical competencies in areas of applied psychology.

Assessment

1. Senior capstone course.
2. Exit examination.
3. Exit survey.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Area Core Requirements

PSY 156	Life Span Developmental Psychology	3
PSY 281	Psychological Research Methods	3
PSY 282	Psychological Statistics	3
PSY 354	Introduction to Social Psychology	3
PSY 380	Cognitive Psychology	3
PSY 390	Psychology of Personality	3

PSY 421	Behavioral Neuroscience	3
PSY 489	Psychology of Learning	3
PSY 499C	Systems and Theories of Psychology	3
		Subtotal: 27

Area Elective Requirements

Choose 24 hours from the following:

PSY 157	Psychology of Adjustment	3
PSY 199	Workshop	1-3
PSY 223	Brain Development and Sex Differences	3
PSY 276	Directed Study	1-3
PSY 300	Human Factors in Design	3
PSY 321	Aging Brain	3
PSY 339	Cooperative Education	1-8
PSY 353	Industrial/Organizational Psychology	3
PSY 356	Cognitive Development of the Infant and Child	3
PSY 358	Psychological Testing	3
PSY 359	Applied Behavior Analysis	3
PSY 360	Sports Psychology	3
PSY 365	Health Psychology	3
PSY 369	Psychology of Human Sexuality: A Lifespan Perspective	3
PSY 384	Sensation and Perception	3
PSY 393	Psychology of Gender	3
PSY 399	Workshop	1-3
PSY 422	Comparative Psychology	3
PSY 450	Abnormal Psychology	3
PSY 452	Disorders of Childhood	3
PSY 456	Introduction to Clinical Psychology	3
PSY 465	Drugs and Behavior	3
PSY 469	Counseling Psychology	3
PSY 470	Research Problems	1-3
PSY 471	Addiction Therapies	3
PSY 472	Practicum	1-6
PSY 475	Selected Topics	3
PSY 477	Seminar in Developmental Research	3
PSY 486	Motivation	3
		Subtotal: 24

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Psychology Major – Bachelor of Science

Program Competencies

Students should:

1. Understand the complexity of human and animal behavior and the influence of psychological, biological and social factors on behavior.
2. Be competent in psychological research methods including experimental design, data analysis and presentation, report writing and computer utilization.
3. Understand the methods and knowledge base of six core content areas of psychology.
4. Understand the principle tenets and major theoretical characteristics of major systems in psychology.

Assessment

1. Senior capstone course.
2. Exit examination.
3. Exit survey.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

Major Core Requirements

PSY 156	Life Span Developmental Psychology	3
PSY 281	Psychological Research Methods	3
PSY 282	Psychological Statistics	3
PSY 354	Introduction to Social Psychology	3
PSY 380	Cognitive Psychology	3
PSY 390	Psychology of Personality	3
PSY 421	Behavioral Neuroscience	3
PSY 489	Psychology of Learning	3
PSY 499C	Systems and Theories of Psychology	3
		Subtotal: 27

Major Elective Requirements

Choose six hours from the following:

PSY 157	Psychology of Adjustment	3
PSY 199	Workshop	1-3
PSY 223	Brain Development and Sex Differences	3
PSY 276	Directed Study	1-3
PSY 300	Human Factors in Design	3
PSY 321	Aging Brain	3
PSY 339	Cooperative Education	1-8
PSY 353	Industrial/Organizational Psychology	3
PSY 356	Cognitive Development of the Infant and Child	3
PSY 358	Psychological Testing	3
PSY 359	Applied Behavior Analysis	3
PSY 360	Sports Psychology	3
PSY 365	Health Psychology	3
PSY 369	Psychology of Human Sexuality: A Lifespan Perspective	3
PSY 384	Sensation and Perception	3
PSY 393	Psychology of Gender	3
PSY 399	Workshop	1-3
PSY 422	Comparative Psychology	3
PSY 450	Abnormal Psychology	3
PSY 452	Disorders of Childhood	3
PSY 456	Introduction to Clinical Psychology	3
PSY 465	Drugs and Behavior	3
PSY 469	Counseling Psychology	3
PSY 471	Addiction Therapies	3
PSY 475	Selected Topics	3
PSY 477	Seminar in Developmental Research	3
PSY 486	Motivation	3
		Subtotal: 6

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Psychology Major - Bachelor of Arts

Program Competencies

Students should:

1. Understand the complexity of human and animal behavior and the influence of psychological, biological and social factors on behavior.
2. Be competent in psychological research methods, including experimental design, data analysis and presentation, report writing and computer utilization.
3. Understand the methods and knowledge base of six core content areas of psychology.
4. Understand the principle tenets and major theoretical characteristics of major systems in psychology.

Assessment

1. Senior capstone course.
2. Exit examination.
3. Exit survey.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

Major Core Requirements

PSY 156	Life Span Developmental Psychology	3
PSY 281	Psychological Research Methods	3
PSY 282	Psychological Statistics	3
PSY 354	Introduction to Social Psychology	3
PSY 380	Cognitive Psychology	3
PSY 390	Psychology of Personality	3
PSY 421	Behavioral Neuroscience	3
PSY 489	Psychology of Learning	3
PSY 499C	Systems and Theories of Psychology	3

Subtotal: 27

Major Elective Requirements

Choose six hours from the following:

PSY 157	Psychology of Adjustment	3
PSY 199	Workshop	1-3
PSY 223	Brain Development and Sex Differences	3
PSY 276	Directed Study	1-3
PSY 300	Human Factors in Design	3
PSY 321	Aging Brain	3
PSY 339	Cooperative Education	1-8
PSY 353	Industrial/Organizational Psychology	3
PSY 356	Cognitive Development of the Infant and Child	3
PSY 358	Psychological Testing	3
PSY 359	Applied Behavior Analysis	3
PSY 360	Sports Psychology	3
PSY 365	Health Psychology	3
PSY 369	Psychology of Human Sexuality: A Lifespan Perspective	3
PSY 384	Sensation and Perception	3
PSY 393	Psychology of Gender	3
PSY 399	Workshop	1-3
PSY 422	Comparative Psychology	3
PSY 450	Abnormal Psychology	3
PSY 452	Disorders of Childhood	3
PSY 456	Introduction to Clinical Psychology	3
PSY 465	Drugs and Behavior	3
PSY 469	Counseling Psychology	3
PSY 470	Research Problems	1-3
PSY 471	Addiction Therapies	3
PSY 472	Practicum	1-6
PSY 475	Selected Topics	3
PSY 477	Seminar in Developmental Research	3
PSY 486	Motivation	3

Subtotal: 6

Minor

Non-STEM minor. All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Psychology Minor

Psychology Minor Requirements

Core Requirements

PSY 154	Introduction to Psychology	3

Subtotal: 3

Electives

Choose 21 hours from PSY.

Subtotal: 21

Total Credit Hours: 24

University of Kentucky Physician Assistant Program, Morehead State University Campus

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The mission of the College of Business and Technology is to prepare students for successful careers and enriched lives in the public, private and nonprofit sectors; conduct and support basic, applied and pedagogical research; and utilize its resources to improve the quality of life in the Eastern Kentucky region.

School of Business Administration

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Business Advisory Board

The School of Business Administration has a Board of Advisors which is composed of alumni and business leaders who have made substantial contributions in their professions. The purpose of the board is to provide advice, assistance, and support for the school, its leadership, its students, its programs, and its faculty. Members of the board include: Kelli Hall Chaney, Big Sandy Community and Technical College; J. Hagan Codell, Traditional Bank; Timothy Devine, Risk Management Consultant; Brandon Fraley, Morgan Stanley; Jeff Fraley, United States Achievement Academy; Dan Haney, Alltech; Gerry Harstine, Harvest Homes and Servline; Bob Helton, Morehead/Rowan County Economic Development Council; Rodney Hitch, EKPC; Ancil Lewis, Big Sandy Health Care, Inc.; Dan Markwell, Trademark Insurance and Investments Inc.; Susan Martin, The Jockey Club Information Systems; Steve McElroy, McElroy Packaging; Mark Messer, Tech Sector Consultant; David Michael, Citizens Bank of Kentucky; Mark Neff, St. Claire Healthcare; Randy Norwood, Regal Power Transmission Solutions; Gwen Pinson, Kentucky Public Service Commission; Tiffany Sams, Skidaddles, Inc.; Creg Storer, Fidelity Investments; Steve Thieme, Fund Evaluation Group; Denny Wallingford, retired; Toyota Motor Manufacturing; and Rich Yeager, Gas and Steam Turbine Consulting Group.

BBA – Bachelor of Business Administration

Program Competencies

1. Communicate effectively.
2. Know and properly analyze ethical issues faced in business.
3. Have a regional and global perspective of business and appreciate the growing diversity of all stakeholders.
4. Understand the regulatory and legal aspects of business and their impact on business decisions.
5. Demonstrate the ability to solve business problems (supported by appropriate analytical and quantitative skills).
6. Recognize the strategic importance of information systems and demonstrate the ability to apply technologies for improving business processes.
7. Be competent in their discipline.

Assessment

The School of Business Administration systematically assesses all BBA programs as a basis for program improvement and quality assurance. Measures used include the Assurance of Learning Assessment for BBA Program.

Bachelor of Business Administration (BBA)

All students choosing the BBA must complete a 27-credit hour track which should be selected from the following fields of study and approved by the academic advisor:

- Accounting
- Business and Information Technology Education
- Finance
- General Business
- Information Systems
- Management
- Marketing
- Small Business Management and Entrepreneurship

Program Requirements

The following courses must be completed for all BBA tracks.

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33-34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Business Qualifying Courses

BBA 295	Business Communication	3
CIS 211	Software Tools for Business	3
MKT 204	Marketing	3
MNGT 201	Principles of Management	3
		Subtotal: 12

Business Prerequisite Course

ACCT 281	Principles of Financial Accounting	3
ACCT 282	Principles of Managerial Accounting	3
BBA 261	Business Law and Regulations	3
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
		Subtotal: 15

Upper Core BBA Courses

Students must be admitted to the School of Business Administration program to register for upper division business core courses. Admission requires completion of the business qualifying courses and a cumulative Morehead State GPA of at least 2.25 for all MSU and transfer courses.

CIS 311	Management Information Systems	3
FIN 360	Business Finance	3
BBA 315	Quantitative Analysis for Business	3
BBA 350	Business Plan Development	3
BBA 363	Ethical Decision Making in Business	3
BBA 370	Operations and Service Management	3
BBA 380	International Business	3
BBA 475	Leadership Development	3
BBA 499C	Strategic Management	3
MATH 305	Business Statistics	3
		Subtotal: 30

BBA 380: (or international cooperative education, or international exchange course experience)

Business students may:

1. Apply the six semester hours of free elective credits to accounting, computer information systems, economics, finance, management, marketing, small business management and entrepreneurship and general business courses.
2. Apply the six hours of free electives toward any 100-499 level course at the University.
3. Complete a second track.

Accounting, Finance, and Information Systems

Faculty

A. Ahmadi, S. Brigham, H. Choi, K. Fatten, T. Ghirmay, B. Grace, C. Grimes, E. Kim, R. McCoy, S. Meisel, S. Nataraj, C. Peng, B. Shi

Accounting Track – Bachelor of Business Administration

Program Competencies

Students completing the program will possess:

1. Knowledge of fundamental accounting issues.
2. Knowledge of ethical conduct and reasoning skills.
3. Oral and written communication skills.
4. Team member skills.
5. Computer and technology skills.

Students will be qualified to design and implement accounting systems, prepare standard financial statements, analyze accounting data and statements for use in decision making, and interpret tax laws for the preparation of tax returns and tax planning.

Graduates will be prepared for entry-level positions in public accounting, industry, or governmental entities, or for graduate study in accounting or other business fields.

Assessment

1. Independent Competency Testing.
2. Alumni and Student Surveys.
3. Focus Group Surveys.
4. SBA Co-Op Employer Performance Appraisals.

In addition to the track courses listed below, the general education, BBA qualifying courses, prerequisite courses, upper division and free electives must be completed. The track in accounting is composed of 27 credit hours of specialized courses in accounting.

Accounting Track Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Business Qualifying Courses

BBA 295	Business Communication	3
CIS 211	Software Tools for Business	3
MKT 204	Marketing	3
MNGT 201	Principles of Management	3
		Subtotal: 12

Business Prerequisite Course

ACCT 281	Principles of Financial Accounting	3
ACCT 282	Principles of Managerial Accounting	3
BBA 261	Business Law and Regulations	3
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
		Subtotal: 15

Upper Core BBA Courses

Students must be admitted to the School of Business Administration program to register for upper division business core courses. Admission requires completion of the business qualifying courses and a cumulative Morehead State GPA of at least 2.25 for all MSU and transfer courses.

CIS 311	Management Information Systems	3
FIN 360	Business Finance	3
BBA 315	Quantitative Analysis for Business	3
BBA 350	Business Plan Development	3
BBA 363	Ethical Decision Making in Business	3
BBA 370	Operations and Service Management	3
BBA 380	International Business	3
BBA 475	Leadership Development	3
BBA 499C	Strategic Management	3
MATH 305	Business Statistics	3
		Subtotal: 30

BBA 380: (or international cooperative education, or international exchange course experience)

Track Requirements

ACCT 381	Intermediate Accounting I	3
ACCT 382	Intermediate Accounting II	3
ACCT 383	Intermediate Accounting III	3
ACCT 387	Income Tax	3
ACCT 390	Cost Accounting I	3
ACCT 483	Auditing	3
		Subtotal: 18

Approved Accounting Track Electives

Choose nine hours from the following:

ACCT 339 or 439	Cooperative Education III or IV	1-8
ACCT 375	Accounting Analysis and Financial Decision Making	3
ACCT 388	Practice in Personal Tax Accounting	3
ACCT 391	Accounting Information Systems	3
ACCT 428	Governmental Accounting	3
ACCT 482	Advanced Accounting	3
ACCT 485	Forensic Accounting	3
ACCT 487	Advanced Tax Accounting II	3
ACCT 490	Cost Accounting II	3
		Subtotal: 9

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

CPA Exam

Kentucky accountancy law requires completion of 150 credit hours before being licensed as a Certified Public Accountant (CPA). Students can fulfill the 150-hour requirement by taking additional undergraduate or graduate hours beyond the bachelor's degree. Any course used to fulfill a BBA/core requirement may not also be used to fulfill a BBA/accounting track requirement. In such cases, a course or courses from the list of approved electives must be substituted for the course(s) used to fulfill the BBA/core.

Total Credit Hours: 120

Finance Track - Bachelor of Business Administration

Program Competencies

Students completing the program should be qualified to:

1. Analyze financial activities and/or events.
2. Write reports concerning financial activities and/or events.
3. Present oral reports concerning financial activities and/or events.
4. Use computer and other technological skills in their careers.
5. Demonstrate knowledge of ethical issues in finance.

Graduates will be prepared for entry-level positions in financial management, investment management, financial institution administration, and financial planning. In addition, graduates will be qualified for graduate study in finance, economics, management, marketing or any other field directly related to finance.

Assessment

1. Finance Exit Exam.
2. SBA Internship Employer Performance Appraisal.

In addition to the track courses listed below, the general education, BBA qualifying courses, prerequisite courses, upper division and free electives must be completed. The track in finance is composed of 27 credit hours of specialized courses in finance.

Finance Track Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Business Qualifying Courses

BBA 295	Business Communication	3
CIS 211	Software Tools for Business	3
MKT 204	Marketing	3
MNGT 201	Principles of Management	3

Subtotal: 12

Business Prerequisite Course

ACCT 281	Principles of Financial Accounting	3
ACCT 282	Principles of Managerial Accounting	3
BBA 261	Business Law and Regulations	3
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3

Subtotal: 15

Upper Core BBA Courses

Students must be admitted to the School of Business Administration program to register for upper division business core courses. Admission requires completion of the business qualifying courses and a cumulative Morehead State GPA of at least 2.25 for all MSU and transfer courses.

CIS 311	Management Information Systems	3
FIN 360	Business Finance	3
BBA 315	Quantitative Analysis for Business	3
BBA 350	Business Plan Development	3
BBA 363	Ethical Decision Making in Business	3
BBA 370	Operations and Service Management	3
BBA 380	International Business	3
BBA 475	Leadership Development	3
BBA 499C	Strategic Management	3
MATH 305	Business Statistics	3

Subtotal: 30

BBA 380: (or international cooperative education, or international exchange course experience)

Track Requirements

FIN 373	Investments	3
FIN 420	Financial Markets and Institutions	3
FIN 460	Advanced Business Finance	3
FIN 485	International Finance	3
FIN 490	Seminar in Financial Theory and Practice	3

Subtotal: 15

Approved Finance Track Electives

Choose 12 hours from the following:

ACCT 375	Accounting Analysis and Financial Decision Making	3
ACCT 387	Income Tax	3
ACCT 487	Advanced Tax Accounting II	3
ACCT 490	Cost Accounting II	3
ECON 341	Public Finance	3
ECON 447	International Economics	3
FIN 325	Bank Management	3
FIN 339 or 439	Cooperative Education III or IV	1-8
FIN 342	Money and Banking	3
FIN 365	Financial Issues for Small Business	3
FIN 370	Working Capital Management	3
FIN 372	Retirement Planning and Employee Benefits	3
FIN 374	Estate Planning and Taxation	3
FIN 376	Risk Manage and Insurance	3
FIN 472	Portfolio Analysis	3
FIN 484	Healthcare Financial Management	3
REAL 330	Real Estate Property Management	3
REAL 331	Real Estate Finance and Investment	3

Subtotal: 12

Any course used to fulfill a BBA/core requirement may not also be used to fulfill a BBA/finance requirement. In such cases, a course or courses from the list of approved finance track elective courses must be substituted for the course(s) used to fulfill the BBA/core requirement.

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Information Systems Track – Bachelor of Business Administration

With the explosion of the internet and a growing dependency on information technology and digital networks in all career fields, computer competency is in high demand. The information systems program prepares

students with the organizational and technical abilities needed for professional information technology positions in contemporary organizations. Students learn to assess business needs and develop appropriate solutions. Computer environments range from desktop hardware and software to local area networks, enterprise systems, object-oriented programming and Internet-based technologies. Graduates typically go into positions such as systems analysts, applications programmers, web developers, network administrators, technical support and systems consultants.

Program Competencies

Specific competencies and outcomes to be achieved by students are:

1. Assess the need for, implement and evaluate information technologies at the enterprise and desktop levels.
2. Demonstrate proficiency in business software applications and decision support technologies that improve performance at all organizational levels.
3. Apply problem solving and analytical reasoning skills within the framework of information systems.
4. Recognize the strategic importance of information systems as an integral part of organizational performance.
5. Demonstrate knowledge of telecommunications, networking, and multi-user, wide-area platforms.
6. Demonstrate the ability to model organizational and quantitative processes and functions as a foundation for designing information system solutions.
7. Demonstrate the ability to apply project management tools and techniques that are essential to managing information system projects.
8. Identify and design opportunities and strategies for IT-enabled organizational improvement and innovation.
9. Demonstrate mastery of functional skills used in designing, building and managing databases that support information systems in an organization.

Assessment

1. AACSB/EBI Undergraduate Business Exit Study (every three years).
2. AACSB/EBI Undergraduate Business Alumni Study (every three years).
3. BBA Business Core Assessment of Learning (specific goals - annually).
4. Embedded outcomes assessment measures established annually to assess the achievement of specific student outcome measures.
5. CIS Core Competency Assessment.

IS Track Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Business Qualifying Courses

BBA 295	Business Communication	3
CIS 211	Software Tools for Business	3
MKT 204	Marketing	3
MNGT 201	Principles of Management	3
		Subtotal: 12

Business Prerequisite Course

ACCT 281	Principles of Financial Accounting	3
ACCT 282	Principles of Managerial Accounting	3
BBA 261	Business Law and Regulations	3
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
		Subtotal: 15

Upper Core BBA Courses

Students must be admitted to the School of Business Administration program to register for upper division business core courses. Admission requires completion of the business qualifying courses and a cumulative Morehead State GPA of at least 2.25 for all MSU and transfer courses.

CIS 311	Management Information Systems	3
FIN 360	Business Finance	3
BBA 315	Quantitative Analysis for Business	3
BBA 350	Business Plan Development	3
BBA 363	Ethical Decision Making in Business	3
BBA 370	Operations and Service Management	3
BBA 380	International Business	3
BBA 475	Leadership Development	3
BBA 499C	Strategic Management	3
MATH 305	Business Statistics	3
		Subtotal: 30

BBA 380: (or international cooperative education, or international exchange course experience)

Track Requirements

CIS 326	Introduction to Databases	3
CIS 340	Data Networking Systems	3
ETM 320	Project Management	3
CIS 490	Strategic IS Management	3
		Subtotal: 12

Choose one of the following:

CIS 385	Introduction to Business Analytics	3
CIS 413	IS Analysis and Design	3
		Subtotal: 3

CIS 385 - Recommended for students who focus on business analytics.
CIS 413 - Recommended for students who are interested in managerial issues of information systems or in the area of systems/business analyst.
If one is selected as the required course, the other may be used as an elective.

Choose one of the following:

CIS 202	Introduction to Programming - Visual Basic	3
CIS 205	Introduction to Programming - C++	3
CIS 214	Introduction to Programming - Java	3
		Subtotal: 3

Choose nine hours from the following:

Approved Electives for the IS Track

CIS 202	Introduction to Programming - Visual Basic	3
CIS 205	Introduction to Programming - C++	3
CIS 214	Introduction to Programming - Java	3
CIS 295	Mobile Application Development	3
CIS 302	Advanced Programming -Visual Basic	3
CIS 305	Advanced Programming-C++	3
CIS 314	Advanced Programming-Java	3
CIS 320	Web Technologies and Design	3
CIS 322	Systems Security and Information Assurance	3
CIS 365	Healthcare Informatics	3
CIS 385	Introduction to Business Analytics	3
CIS 413	IS Analysis and Design	3
CIS 426	Database Administration	3
CIS 430	Advanced Topics in Information Systems	3

CIS 439	Cooperative Education IV	1-8
CIS 442	Network Administration	3
CIS 476	Special Topics in Computer Information Systems	1-3
FIN 365	Financial Issues for Small Business	3
MNGT 365	Financial Issues for Small Business	3
MNGT 310	Small Business Organization	3
Electives	300-level or above CS or ETM electives	3
		Subtotal: 9

Even though not required, all IS students are encouraged to explore and investigate a possible 180 hour IT cooperative education placement or other virtual internship with an organization between their junior and senior year. Three-hour credit for cooperative education is available. More information about possibilities may be obtained by emailing or making an appointment with the cooperative education coordinator.

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Students may select additional CIS courses from this list to fulfill the free electives if students desire to gain additional coursework in information systems or internships.

Total Credit Hours: 120

Computer Information Systems Minor

CIS Minor Requirements

Core Requirements

CIS 200	Problem Solving in IS	3
CIS 211	Software Tools for Business	3
CIS 311	Management Information Systems	3
CIS 340	Data Networking Systems	3
		Subtotal: 12

Electives

Choose one of the following:

CIS 320	Web Technologies and Design	3
CIS 405	Web Development Strategies and E-commerce	3
		Subtotal: 3

Choose six hours (two courses) from the following:

Approved electives for the CIS Minor

CIS 205	Introduction to Programming - C++	3
CIS 214	Introduction to Programming - Java	3
CIS 303	Data Structures	3
CIS 305	Advanced Programming-C++	3
CIS 314	Advanced Programming-Java	3
CIS 326	Introduction to Databases	3
CIS 365	Healthcare Informatics	3
CIS 405	Web Development Strategies and E-commerce	3
CIS 413	IS Analysis and Design	3
CIS 442	Network Administration	3
		Subtotal: 6

Total Credit Hours: 21

Management and Marketing

Faculty

D. Barber, S. Chen, A. Hassan, J. Hypes, M. Hypes, L. Lunt, V. Madupu, F. Mohammed, J. Musgrave, D. Nehring, J. Nelson, L. Njoroge, J. Ratliff, S. Stapleton, C. Trent

General Business Track – Bachelor of Business Administration

In addition to the track courses listed below, the general education, BBA qualifying courses, prerequisite courses, upper division and free electives must be completed. The track in general business is composed of 27 credit hours (one required course in accounting, computer information systems, economics, finance, management, marketing) and three approved business electives.

Program Competencies

Students completing the program will be able to:

1. Communicate effectively.
2. Know and properly analyze ethical issues faced in business.
3. Have a regional and global perspective of business and appreciate the growing diversity of all stakeholders.
4. Understand the regulatory and legal aspects of business and their impact on business decisions.
5. Demonstrate the ability to solve business problems (supported by appropriate analytical and quantitative skills).
6. Recognize the strategic importance of information systems and demonstrate the ability to apply technologies for improving business processes.
7. Be competent in their discipline.

General Business Track Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Business Qualifying Courses

BBA 295	Business Communication	3
CIS 211	Software Tools for Business	3
MKT 204	Marketing	3
MNGT 201	Principles of Management	3
		Subtotal: 12

Business Prerequisite Course

ACCT 281	Principles of Financial Accounting	3
ACCT 282	Principles of Managerial Accounting	3
BBA 261	Business Law and Regulations	3
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
		Subtotal: 15

Upper Core BBA Courses

Students must be admitted to the School of Business Administration program to register for upper division business core courses. Admission requires completion of the business qualifying courses and a cumulative Morehead State GPA of at least 2.25 for all MSU and transfer courses.

CIS 311	Management Information Systems	3
FIN 360	Business Finance	3
BBA 315	Quantitative Analysis for Business	3
BBA 350	Business Plan Development	3
BBA 363	Ethical Decision Making in Business	3
BBA 370	Operations and Service Management	3
BBA 380	International Business	3
BBA 475	Leadership Development	3

BBA 499C	Strategic Management	3
MATH 305	Business Statistics	3

Subtotal: 30

BBA 380: (or international cooperative education, or international exchange course experience)

Track Requirements

Accounting - Choose one course

Any 300-level or 400-level ACCT course for which prerequisites are met and is not being used to fulfill any other BBA-General Business degree requirement.

Subtotal: 3

Computer Information Systems - Choose one course

Any 300-level or 400-level CIS course for which prerequisites are met and is not being used to fulfill any other BBA-General Business degree requirement.

Subtotal: 3

Economics - Choose one course

Any 300-level or 400-level ECON course for which prerequisites are met and is not being used to fulfill any other BBA-General Business degree requirement.

Subtotal: 3

Finance - Choose one course

Any 300-level or 400-level FIN course for which prerequisites are met and is not being used to fulfill any other BBA-General Business degree requirement.

Subtotal: 3

Management - Choose one course

Any 300-level or 400-level MNGT course for which prerequisites are met and is not being used to fulfill any other BBA-General Business degree requirement.

Subtotal: 3

Marketing - Choose one course

Any 300-level or 400-level MKT course for which prerequisites are met and is not being used to fulfill any other BBA-General Business degree requirement.

Subtotal: 3

General Business Electives - Choose nine hours

Approved general business electives are any 300-level or 400-level business courses with the following prefixes: ACCT, BBA, CIS, ECON, FIN, MNGT, MKT or REAL. The nine hours of electives must consist of courses for which the prerequisites are met and courses that are not used to fulfill any other BBA-general business degree requirement. A maximum of three hours may be taken as cooperative education.

Subtotal: 9

Free Electives

Free Electives	(chosen by student)	variable

Subtotal: variable

Total Credit Hours: 120

Management Track – Bachelor of Business Administration

Program Competencies

Students completing the program will be able to:

1. Identify legal and ethical issues in business and understand appropriate courses of action.
2. Work effectively as first-line managers and leaders, and have an understanding of motivation, leadership, and teamwork consistent with effective organizational management.
3. Understand the business and managerial tasks associated with developing and executing organizational strategies and will understand the implications of those strategies for both the firm's operations and its stakeholders.

Assessment

Management exit examination

Management Track Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Business Qualifying Courses

BBA 295	Business Communication	3
CIS 211	Software Tools for Business	3
MKT 204	Marketing	3
MNGT 201	Principles of Management	3

Subtotal: 12

Business Prerequisite Course

ACCT 281	Principles of Financial Accounting	3
ACCT 282	Principles of Managerial Accounting	3
BBA 261	Business Law and Regulations	3
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3

Subtotal: 15

Upper Core BBA Courses

Students must be admitted to the School of Business Administration program to register for upper division business core courses. Admission requires completion of the business qualifying courses and a cumulative Morehead State GPA of at least 2.25 for all MSU and transfer courses.

CIS 311	Management Information Systems	3
FIN 360	Business Finance	3
BBA 315	Quantitative Analysis for Business	3
BBA 350	Business Plan Development	3
BBA 363	Ethical Decision Making in Business	3
BBA 370	Operations and Service Management	3
BBA 380	International Business	3
BBA 475	Leadership Development	3
BBA 499C	Strategic Management	3
MATH 305	Business Statistics	3

Subtotal: 30

BBA 380: (or international cooperative education, or international exchange course experience)

Track Requirements

MNGT 311	Human Resource Management	3
MNGT 465	Organizational Behavior	3

Subtotal: 6

Approved Management Track Electives

Choose nine hours (three courses) from the following:

MNGT 310	Small Business Organization	3
MNGT 339 or 439	Cooperative Education III or IV	1-8
MNGT 362	The Legal Environment and Business Practices	3

MNGT 365	Financial Issues for Small Business	3
MNGT 399	Special Class	1-4
MNGT 409	International Management	3
MNGT 411	Labor Relations	3
MNGT 417	Management and Marketing of Public and Nonprofit Organizations	3
MNGT 420	New Venture Creations	3
MNGT 450	Supply Chain Management	3
MNGT 476	Special Problems in Management	1-3
		Subtotal: 9

MNGT 439: (maximum of three credit hours of co-op credit)

Guided Electives

Management track students must choose four courses (12 credit hours) from the following categories. The same course cannot be used to fulfill the approved management electives and guided electives components of the degree program.

Category 1: Management

Choose twelve hours (four courses) from the following:

MNGT 310	Small Business Organization	3
MNGT 339 or 439	Cooperative Education III or IV	1-8
MNGT 362	The Legal Environment and Business Practices	3
MNGT 365	Financial Issues for Small Business	3
MNGT 399	Special Class	1-4
MNGT 409	International Management	3
MNGT 411	Labor Relations	3
MNGT 417	Management and Marketing of Public and Nonprofit Organizations	3
MNGT 420	New Venture Creations	3
MNGT 450	Supply Chain Management	3
MNGT 476	Special Problems in Management	1-3
MKT 345	Marketing Strategies for Small Business	3
MKT 350	Professional Selling	3
MKT 354	Consumer Behavior	3
MKT 365	Services and Relationship Marketing	3
MKT 451	Retail Marketing	3
MKT 452	Marketing Research and Analysis	3
MKT 469	International Marketing	3
ECON 447	International Economics	3
FIN 342	Money and Banking	3
FIN 376	Risk Manage and Insurance	3
FIN 484	Healthcare Financial Management	3
FIN 485	International Finance	3
REAL 105	Real Estate Principles	3
REAL 309	Real Estate Land Planning and Development	3
REAL 330	Real Estate Property Management	3
BBA 301	The Healthcare System	3
HSM 361	Healthcare Legal and Regulatory Environment	3
CIS 365	Healthcare Informatics	3
		Subtotal: 12

MNGT 310, MNGT 339, MNGT 439: (maximum of three credit hours of co-op credit)

Category 2: International Management

MNGT 409	International Management	3
MKT 469	International Marketing	3
		Subtotal: 6

Choose three hours (one course) from the following:

ECON 447	International Economics	3
FIN 485	International Finance	3
		Subtotal: 3

Choose three hours (one course) from the following:

MNGT 310, 339, or 439	(choose one)	3
MNGT 362	The Legal Environment and Business Practices	3
MNGT 365	Financial Issues for Small Business	3
MNGT 399	Special Class	1-4
MNGT 409	International Management	3
MNGT 411	Labor Relations	3
MNGT 417	Management and Marketing of Public and Nonprofit Organizations	3
MNGT 420	New Venture Creations	3
MNGT 450	Supply Chain Management	3
MNGT 476	Special Problems in Management	1-3
MKT 345	Marketing Strategies for Small Business	3
MKT 350	Professional Selling	3
MKT 354	Consumer Behavior	3
MKT 451	Retail Marketing	3
MKT 452	Marketing Research and Analysis	3
ECON 447	International Economics	3
FIN 342	Money and Banking	3
REAL 105	Real Estate Principles	3
REAL 309	Real Estate Land Planning and Development	3
REAL 330	Real Estate Property Management	3
		Subtotal: 3

MNGT 310, MNGT 339, MNGT 439: (maximum of three credit hours of co-op credit).

In addition, students choosing the International Management category are required to complete:

1. Six hours of study in a foreign language or its equivalent (as approved by the associate dean/department chair); and
2. IST 301 — International Studies Study Abroad (one credit hour) for participation in a Kentucky Institutive of International Studies (KIIS), Cooperative Center for Study Abroad (CCSA) program, the Magellan Exchange Program or another international study program approved by the associate dean or department chair.

Category 3: Health Care Management

BBA 301	The Healthcare System	3
FIN 484	Healthcare Financial Management	3
		Subtotal: 6

Choose six hours (two courses) from the following:

HSM 361	Healthcare Legal and Regulatory Environment	3
CIS 365	Healthcare Informatics	3
MKT 365	Services and Relationship Marketing	3
FIN 376	Risk Manage and Insurance	3
MNGT 439	Cooperative Education IV	1-8
		Subtotal: 6

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Marketing Track - Bachelor of Business Administration

Program Competencies

Students completing the program should possess the ability to:

1. Demonstrate a general knowledge of key marketing principles.
2. Demonstrate knowledge of problem solving techniques.

3. Analyze comprehensive cases describing organizations, identify problems or decisions associated with marketing, and plan courses of action for solving the problems or making decisions.

Assessment

1. Comprehensive Marketing Exit Exam.
2. Comprehensive Marketing Case Analysis.

Marketing Track Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Business Qualifying Courses

BBA 295	Business Communication	3
CIS 211	Software Tools for Business	3
MKT 204	Marketing	3
MNGT 201	Principles of Management	3
		Subtotal: 12

Business Prerequisite Course

ACCT 281	Principles of Financial Accounting	3
ACCT 282	Principles of Managerial Accounting	3
BBA 261	Business Law and Regulations	3
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
		Subtotal: 15

Upper Core BBA Courses

Students must be admitted to the School of Business Administration program to register for upper division business core courses. Admission requires completion of the business qualifying courses and a cumulative Morehead State GPA of at least 2.25 for all MSU and transfer courses.

CIS 311	Management Information Systems	3
FIN 360	Business Finance	3
BBA 315	Quantitative Analysis for Business	3
BBA 350	Business Plan Development	3
BBA 363	Ethical Decision Making in Business	3
BBA 370	Operations and Service Management	3
BBA 380	International Business	3
BBA 475	Leadership Development	3
BBA 499C	Strategic Management	3
MATH 305	Business Statistics	3
		Subtotal: 30

BBA 380: (or international cooperative education, or international exchange course experience)

Track Requirements

MKT 354	Consumer Behavior	3
MKT 365	Services and Relationship Marketing	3
MKT 452	Marketing Research and Analysis	3
MKT 495	Marketing Strategies	3
		Subtotal: 12

Approved Marketing Track Electives

Choose 15 hours from the following:

MKT 325	Marketing Ethics and Social Responsibility	3
MKT 340	E-Marketing and Social Networking	3
MKT 345	Marketing Strategies for Small Business	3
MKT 350	Professional Selling	3
MKT 375	Sustainable Marketing	3
MKT 380	Corporate Marketing Strategies	3
MKT 451	Retail Marketing	3
MKT 454	Integrated Market Communication	3
MKT 455	Advertising Principles and Processes	3
MKT 469	International Marketing	3
MKT 476	Special Problems in Marketing	1-3
MKT 339 or 439	Cooperative Education III or IV	1-8
		Subtotal: 15

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Small Business Management and Entrepreneurship Track – Bachelor of Business Administration

Program Competencies

Upon successful completion of the program, the student should be able to:

1. Understand the essential requirements for the successful planning of a new venture and be aware of the issues involved in initiating a new venture.
2. Understand how to create, find, control and use necessary resources to build a growth-oriented venture by improving a student's ability to analyze, articulate, present and defend chosen entrepreneurial activities recognizing that no one course of action is necessarily correct or the best.
3. Develop skills associated with innovative management in entrepreneurial environments where uncertainty and lack of information and resources are typical.
4. Intelligently evaluate potential start-up opportunities for personal involvement.
5. Fully understand the major components of full-cycle development of an idea into a successful enterprise.
6. Understand the components and processes involved in developing a business plan (including marketing and financial plans).
7. Identify and understand the various technical formalities associated with the actual starting of a new business, such as obtaining permits, registering business names with government agencies, filing a corporate charter and securing trademarks for important company identification marks.
8. Develop a projected profit and loss statement, balance sheet, and cash flow statement for a small or new business.

Assessment

1. Comprehensive Marketing Exit Exam.
2. Comprehensive Marketing Case Analysis.

Small Business Management and Entrepreneurship Track Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements

that are also general education requirements will count in both places (as applicable).

Business Qualifying Courses

BBA 295	Business Communication	3
CIS 211	Software Tools for Business	3
MKT 204	Marketing	3
MNGT 201	Principles of Management	3
		Subtotal: 12

Business Prerequisite Course

ACCT 281	Principles of Financial Accounting	3
ACCT 282	Principles of Managerial Accounting	3
BBA 261	Business Law and Regulations	3
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
		Subtotal: 15

Upper Core BBA Courses

Students must be admitted to the School of Business Administration program to register for upper division business core courses. Admission requires completion of the business qualifying courses and a cumulative Morehead State GPA of at least 2.25 for all MSU and transfer courses.

BBA 315	Quantitative Analysis for Business	3
BBA 350	Business Plan Development	3
BBA 363	Ethical Decision Making in Business	3
BBA 370	Operations and Service Management	3
BBA 380	International Business	3
BBA 475	Leadership Development	3
BBA 499C	Strategic Management	3
CIS 311	Management Information Systems	3
FIN 360	Business Finance	3
MATH 305	Business Statistics	3
		Subtotal: 30

BBA 380: (or international cooperative education, or international exchange course experience)

Track Requirements

MNGT 310	Small Business Organization	3
MNGT 311	Human Resource Management	3
MKT 345	Marketing Strategies for Small Business	3
FIN 365	Financial Issues for Small Business	3
MNGT 420	New Venture Creations	3
		Subtotal: 15

Approved SBME Track Electives

Choose 4 courses (12 hours) from the following:

CIS 320	Web Technologies and Design	3
ECON 447	International Economics	3
FIN 370	Working Capital Management	3
FIN 485	International Finance	3
MKT 340	E-Marketing and Social Networking	3
MKT 469	International Marketing	3
MNGT 315	Family Business	3
MNGT 320	Social Entrepreneurship	3
MNGT 339 or 439	Cooperative Education III or IV	1-8
MNGT 355	Business Innovation and Creativity	3
MNGT 409	International Management	3
MNGT 476	Special Problems in Management	1-3
REAL 105	Real Estate Principles	3
		Subtotal: 12

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Sport Management Area - Bachelor of Arts

The mission of the sport management program is to offer high quality educational experiences to cultivate students' sport management, marketing, communication and financial skills. These skills are developed in an environment that promotes sound decision-making based on social, psychological and international foundations, recognized management principles, as well as the ethical and legal impact of such decisions. The skills developed provide students with the opportunity to analyze, synthesize and communicate information in a dynamic global sport industry.

Program Competencies

Students completing the program will be able to:

1. Communicate effectively.
2. Know and properly analyze ethical issues faced in the business of sport.
3. Have a regional and global perspective of the business of sport.
4. Understand the regulatory, technological, and legal aspects of the business of sport and their impact on management decisions.
5. Demonstrate the ability to solve sport business problems (supported by appropriate analytical and quantitative skills).
6. Recognize the strategic importance of information systems and demonstrate the ability to apply technologies for improving business processes.
7. Be competent in the discipline of sport management.

Assessment

Senior capstone course

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Sport Management Requirements

SPMT 100	Introduction to Sport Management	3
SPMT 102	Diversity in Sport and Physical Activity	3
SPMT 200	Management of Sport and Physical Activity Programs	3
SPMT 204	Sport Finance	3
SPMT 206	Ethics in Sport and Physical Activity	3
SPMT 304	Sport Economics	3
SPMT 307	Sport Marketing	3
SPMT 309	Risk Management in Sport and Physical Activity	3
SPMT 310	Governance in Sport	3
SPMT 380	Media Relations in Sport and Physical Activity	3
SPMT 402	Planning, Designing, and Managing Sport and Physical Activity Facilities	3
SPMT 430	Sport in a Global Society	3
SPMT 450	Field Experience Preparation	3
SPMT 471	Sport Management Internship	12
SPMT 480	Legal Aspects of Sport Physical Activity	3
SPMT 481	Employee Service Management in Sport and Physical Activity Settings	3

SPMT 482	Current Issues in Sport Management	3
SPMT 499C	Senior Capstone	3
		Subtotal: 63

Sport Management Electives

Choose 21 hours from the following (based on student's interests and career objectives):

ACCT 281	Principles of Financial Accounting	3
BBA 261	Business Law and Regulations	3
BBA 295	Business Communication	3
CIS 311	Management Information Systems	3
ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
MNGT 201	Principles of Management	3
MNGT 311	Human Resource Management	3
MNGT 362	The Legal Environment and Business Practices	3
MNGT 417	Management and Marketing of Public and Nonprofit Organizations	3
MNGT 465	Organizational Behavior	3
MKT 204	Marketing	3
MKT 340	E-Marketing and Social Networking	3
MKT 354	Consumer Behavior	3
COMS 290	Conflict and Communication	3
COMS 333	Social Media and Community	3
COMS 340	Event Planning and Public Relations	3
COMS 382	Public Relations Principles	3
CVM 492	Media Law and Ethics	3
		Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Students may wish to take SPMT 476. This course is not part of the program requirements, but can be used as a general elective.

Total Credit Hours: 120

Business Studies Area – Associate of Applied Science (AAS)

Program Competencies

Students completing the program should be able to:

1. Communicate effectively.
2. Be able to recognize fundamental ethical issues in business.
3. Identify basic regulatory and legal aspects of business and how they impact business decisions.
4. Demonstrate the ability to solve basic business problems, supported by appropriate analytical skills.
5. Recognize the importance of information systems and demonstrate the ability to apply fundamental technologies for improving business processes.
6. Build an understanding of the fundamental areas of business leadership: financial accounting, legal/regulatory issues, information systems, management, marketing and economics.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	18
MATH 152, 174 or 175	(choose one)	3-4
		Subtotal: 21

Refer to the Associate Degree General Education section (p. 29) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

AAS Requirements

Business Core Requirements

ACCT 281	Principles of Financial Accounting	3
BBA 261	Business Law and Regulations	3
BBA 295	Business Communication	3
BBA 363	Ethical Decision Making in Business	3
CIS 211	Software Tools for Business	3
CIS 311	Management Information Systems	3
MKT 204	Marketing	3
MNGT 201	Principles of Management	3
ECON 201	Principles of Macroeconomics	3
		Subtotal: 27

Elective Requirements

Select 18 hours from the following:

ACCT 282	Principles of Managerial Accounting	3
BBA 301	The Healthcare System	3
BBA 350	Business Plan Development	3
BBA 380	International Business	3
CIS 320	Web Technologies and Design	3
ECON 202	Principles of Microeconomics	3
ECON 342	Money and Banking	3
FIN 360	Business Finance	3
MKT 325	Marketing Ethics and Social Responsibility	3
MKT 354	Consumer Behavior	3
MNGT 311	Human Resource Management	3
SPMT 100	Introduction to Sport Management	3
		Subtotal: 18

Total Credit Hours: 63

Entrepreneurship Minor

Entrepreneurship Minor Requirements

Core Requirements

Complete the following:

ACCT 281	Principles of Financial Accounting	3
ACCT 282	Principles of Managerial Accounting	3
BBA 200	Business and Entrepreneurship	3
BBA 261	Business Law and Regulations	3
BBA 350	Business Plan Development	3
MKT 204	Marketing	3
MNGT 201	Principles of Management	3
		Subtotal: 21

Electives

Choose three hours from the following:

MNGT 310	Small Business Organization	3
MNGT 311	Human Resource Management	3
MNGT 315	Family Business	3
MNGT 320	Social Entrepreneurship	3
MNGT 355	Business Innovation and Creativity	3
MNGT 417	Management and Marketing of Public and Nonprofit Organizations	3
		Subtotal: 3

Total Credit Hours: 24

General Business Minor

(Non-Business Majors Only)

General Business Minor Requirements

Electives

Choose one of the following:

ECON 201	Principles of Macroeconomics	3
ECON 202	Principles of Microeconomics	3
		Subtotal: 3

Core Requirements

Complete the following:

ACCT 281	Principles of Financial Accounting	3
BBA 295	Business Communication	3
CIS 211	Software Tools for Business	3
MKT 204	Marketing	3
BBA 261	Business Law and Regulations	3
MNGT 201	Principles of Management	3
		Subtotal: 18

Total Credit Hours: 21

Marketing Minor

Marketing Minor Requirements

Core Requirements

Complete the following:

MKT 204	Marketing	3
MKT 354	Consumer Behavior	3
MKT 365	Services and Relationship Marketing	3
		Subtotal: 9

Electives

Choose twelve hours (four courses) from the following:

MKT 325	Marketing Ethics and Social Responsibility	3
MKT 340	E-Marketing and Social Networking	3
MKT 345	Marketing Strategies for Small Business	3
MKT 350	Professional Selling	3
MKT 375	Sustainable Marketing	3
MKT 380	Corporate Marketing Strategies	3
MKT 451	Retail Marketing	3
MKT 452	Marketing Research and Analysis	3
MKT 454	Integrated Market Communication	3
MKT 455	Advertising Principles and Processes	3
MKT 469	International Marketing	3
MKT 495	Marketing Strategies	3
		Subtotal: 12

Total Credit Hours: 21

Human Services Leadership Certificate

HSLC is a stackable certificate program to foster leadership and introductory-level general business skills in undergraduate students seeking or currently employed in human services professions, such as addiction recovery centers or other related positions. The certificate is open to all undergraduate students.

The goal of the certificate is to introduce, reinforce, and foster mastery of the concepts and skills necessary to effectively lead organizations and units within the human services system including marketing, management, budgeting, ethics, and leadership. Additional goals include increasing communication and human services intervention. Students that possess the knowledge and skills to lead within human services institutions and systems will be better prepared for success in a global environment and students who complete the certificate will have tangible evidence that they are learners who promote diversity of people and ideas, both of which are key goals outlined in MSU's mission statement. In addition, certificate completers will be prepared to better serve our communities to improve the quality of life, as outlined in the institution's mission statement.

Beyond the School of Business Administration, the following offer courses in support of the certificate: School of English, Communication, Media and Languages; Department of Kinesiology, Health & Imaging Sciences; Department of Nursing; and the Department of Sociology, Social Work, & Criminology.

Program Competencies

Students completing the Human Services Leadership Certificate Program will be able to:

1. Apply foundational business principles of management, marketing, accounting within human services organizations.
2. Properly analyze ethical issues related to business and human services.
3. Apply concepts of human services and mental health maintenance practices in service to others.

Program Requirements

Communication

Choose one of the following:

BBA 295	Business Communication	3
COMS 290	Conflict and Communication	3
		Subtotal: 3

Human Services Interventions

Choose two of the following:

HLTH 435	Health Counseling	3
SWK 333	Beginning Helping Skills for Human Service Professionals	3
SWK 334	Women and Partner Violence	3
SWK 358	Child Abuse and Neglect	3
SWK 360	Crisis Intervention	3
SWK 470	Introduction to Substance Use Disorder Counseling	3
SWK 471	Screening, Assessment, and Treatment of Substance Use Disorders	3
		Subtotal: 6

Note: SWK 470 and SWK 471 must be taken together.

Foundations

ACCT 281	Principles of Financial Accounting	3
BBA 475	Leadership Development	3
FIN 264	Personal Finance	3
MKT 204	Marketing	3
MNGT 201	Principles of Management	3
NURS 361	Leadership for the Health Care Professional	3
SWK 230	Social Welfare History & Ethics	3
		Subtotal: 21

Total Credit Hours: 30

School of Engineering and Computer Science

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School of Engineering and Computer Science Advisory Board

The School of Engineering and Computer Science (SECS) has an advisory board composed of alumni and business leaders who have made substantial contributions in their professions. The board works with the faculty to ensure that the degree programs provide students with "real life" perspectives and that its activities serve the MSU service region. The

purpose of the Advisory Board is to ensure a positive linkage of SECS with business, industry, education, government, and the engineering/technical management and technical education professions.

Members of the board include: Richard Vincent, Associated General Contractors of KY; Katrina Bradley, At-Large; Dick Konopka, At-Large; Christopher Daniels, Boneal Inc.; John Payne, Brasfield & Gorrie General Contractors; Jeff Dupuy, Dynegy; Scott Ledford, General Shale; Barry Phelps and Barbara Staviski, KCTCS; Paul Daniel, KDMK; Eric McCann, Lexmark International; Matt Watson, Link-Belt Construction Equipment; Martha Williams, Martin County ATC; Stephanie Emmons, Fleming County High School; Jason Fights, Mazak Corporation; Kent Flannery and Mark Hogge, Middough Inc.; Richard Ramsdell, Ramsdell Consulting; Randy Bungardner, Regal Beloit America, Inc.; Sanford Holbrook, Robertson County Schools; Tim Foster, Siemens; Gregg Jones, Square D/Schneider Electric; James Barber, SRG Global, Inc.; Adam Mellenkamp, Stober Drives, Inc.; Christie Smallwood and Aaron Franke, Summit Polymers, Inc.; Steve Defazio (Advisory Board Chair), North American Stamping Group.; Herb Wedig and Andrew Rittmeier, Technical Training Aids; Greg Spencer, The Walker Company; Joshua Bradley, Senior Data Scientist at Microsoft; Tom Holland and Scott Brand, TMMK; Walt Pozgay, GE Appliances; David Opalka, Turner Construction; Charles Dunaway, United Group Services; Rick Fulton, Flour Corp; Tim Frazier, Catalent; Cody Garcia, Commonwealth Tool; Doug Thorpe, Industrial Star; Justin Lane, Kentucky American Water; and Mike Wilson, Woolpert.

Computer Science and Electronics Department

Faculty

A. Chaudhry, A. Paul, C. Cheng, H. Elgazzar, J. Ortega-Moody, S. Rashad

Computer Science

The Computer Science program aspires to be a leading, nationally recognized, high-quality program to prepare graduates for a dynamic workforce and advanced professional studies. Our mission focuses on preparing graduates who have a firm understanding of the fundamentals of computer science and who have strong problem-solving skills to solve new problems by devising and implementing solutions and are prepared to pursue 21st Century careers in the diverse fields of computer science, and be able to pursue the graduate study in computer science at the graduate level.

The Computer Science program aims to produce graduate who will:

1. Have a firm and competitive foundation in computer science.
2. Be able to function as productive members and leaders of software development teams or in any other computer science related capacity.
3. Pursue life-long learning, continue to grow professionally, and be qualified to enter graduate studies in computer science.
4. Demonstrate an understanding and awareness of societal and ethical issues in computing.

Computer Science Area – Bachelor of Science

Program Competencies

Upon graduation from the Computer Science program, students will have the ability to:

1. Analyze complex computing problems and apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate computing-based solutions to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Computer Science Requirements

CIS 205	Introduction to Programming - C++	3
CS 170	Introduction to Computer Science	4
CS 285	Programming in C#	3
CS 303	Data Structures	3
CS 310	Algorithms and Advanced Data Structures	3
CS 335	Theory of Programming Language	3
CS 340	Computer Architecture and Organization	3
CS 360	Operating Systems	3
CS 372	Math for Gaming and Computer Science Applications	3
CS 380	Software Engineering	3
CS 385	Advanced Programming Methods	3
CS 440	Parallel and Distributed Systems	3
CS 480	Computer Security	3
CS 499C	Capstone and Senior Thesis I	2
CS 499D	Capstone and Senior Thesis II	1
MATH 175	Calculus I	4
MATH 275	Calculus II	4
MATH 308	Discrete Mathematics	3
		Subtotal: 54

Choose one of the following:

MATH 353	Statistics	3
MATH 365	Introduction to Mathematical Statistics	3
		Subtotal: 3

Track Requirements - Choose one of the following tracks:

Track 1: Advanced Topics Track

CS 430	Machine Learning	3
		Subtotal: 3

Choose six hours from the following:

CS 172	Computer Games Concepts	3
CS 312	Game Prototype Design and Implementation	3
CS 420	Data Mining Concepts	3
CS 470	Artificial Intelligence	3
CS 472	Multiplayer Networking Game Programming	3
CS 482	Digital Forensics	3
CS 485	Network Security	3
		Subtotal: 6

Choose two of the following in consultation with advisor

BIOL 171	Principles of Biology	4
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4

PHYS 201	Elementary Physics I	4
PHYS 202	Elementary Physics II	4
		Subtotal: 8

Choose 9 hours from the following in consultation with advisor (six hours must be from the CS prefix):

CS 172	Computer Games Concepts	3
CS 312	Game Prototype Design and Implementation	3
CS 412	Software Engineering for Computer Games	3
CS 420	Data Mining Concepts	3
CS 430	Machine Learning	3
CS 450	Computer Graphics	3
CS 460	Scientific and Parallel Computing	3
CS 470	Artificial Intelligence	3
CS 472	Multiplayer Networking Game Programming	3
CS 476	Special Problems	1-3
CS 482	Digital Forensics	3
CS 485	Network Security	3
CIS 314	Advanced Programming-Java	3
CIS 322	Systems Security and Information Assurance	3
CIS 326	Introduction to Databases	3
CIS 405	Web Development Strategies and E-commerce	3
CIS 442	Network Administration	3
EEC 345	Microprocessor Electronics	3
EEC 480	Digital Communication and Networking	3
MATH 320	Information Theory and Codes	3
		Subtotal: 9

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Track 2: Data Science Track

CS 420	Data Mining Concepts	3
CS 430	Machine Learning	3
CS 470	Artificial Intelligence	3
		Subtotal: 9

Choose two of the following in consultation with advisor

BIOL 171	Principles of Biology	4
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
PHYS 201	Elementary Physics I	4
PHYS 202	Elementary Physics II	4
		Subtotal: 8

Choose 9 hours from the following in consultation with advisor (six hours must be from the CS prefix):

CS 172	Computer Games Concepts	3
CS 312	Game Prototype Design and Implementation	3
CS 412	Software Engineering for Computer Games	3
CS 420	Data Mining Concepts	3
CS 430	Machine Learning	3
CS 450	Computer Graphics	3
CS 460	Scientific and Parallel Computing	3
CS 470	Artificial Intelligence	3
CS 472	Multiplayer Networking Game Programming	3
CS 476	Special Problems	1-3
CS 482	Digital Forensics	3
CS 485	Network Security	3
CIS 314	Advanced Programming-Java	3
CIS 322	Systems Security and Information Assurance	3
CIS 326	Introduction to Databases	3
CIS 405	Web Development Strategies and E-commerce	3
CIS 442	Network Administration	3
EEC 345	Microprocessor Electronics	3
EEC 480	Digital Communication and Networking	3
MATH 320	Information Theory and Codes	3
		Subtotal: 9

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Track 3: Cybersecurity Track

CS 420	Data Mining Concepts	3
CS 482	Digital Forensics	3
CS 485	Network Security	3
		Subtotal: 9

Choose two of the following in consultation with advisor

BIOL 171	Principles of Biology	4
CHEM 111	Principles of Chemistry I	4
CHEM 112	Principles of Chemistry II	4
PHYS 201	Elementary Physics I	4
PHYS 202	Elementary Physics II	4
		Subtotal: 8

Choose 9 hours from the following in consultation with advisor (six hours must be from the CS prefix):

CS 172	Computer Games Concepts	3
CS 312	Game Prototype Design and Implementation	3
CS 412	Software Engineering for Computer Games	3
CS 420	Data Mining Concepts	3
CS 430	Machine Learning	3
CS 450	Computer Graphics	3
CS 460	Scientific and Parallel Computing	3
CS 470	Artificial Intelligence	3
CS 472	Multiplayer Networking Game Programming	3
CS 476	Special Problems	1-3
CS 482	Digital Forensics	3
CS 485	Network Security	3
CIS 314	Advanced Programming-Java	3
CIS 322	Systems Security and Information Assurance	3
CIS 326	Introduction to Databases	3
CIS 405	Web Development Strategies and E-commerce	3
CIS 442	Network Administration	3
EEC 345	Microprocessor Electronics	3
EEC 480	Digital Communication and Networking	3
MATH 320	Information Theory and Codes	3
		Subtotal: 9

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Track 4: Computer Engineering Track

EEC 141	Fundamentals of Electric Circuits	3
EEC 241	Circuit Analysis	3
EEC 242	Principles of Electronic Communications	3
EEC 245	Digital Electronics	3

EEC 344	Wireless Communications	3
EEC 355	Digital and Microprocessor Systems	3
CS 430	Machine Learning	3
PHYS 201	Elementary Physics I	4
PHYS 202	Elementary Physics II	4
		Subtotal: 29

Choose 3 hours from the following in consultation with advisor:

CS 172	Computer Games Concepts	3
CS 312	Game Prototype Design and Implementation	3
CS 412	Software Engineering for Computer Games	3
CS 420	Data Mining Concepts	3
CS 430	Machine Learning	3
CS 450	Computer Graphics	3
CS 460	Scientific and Parallel Computing	3
CS 470	Artificial Intelligence	3
CS 472	Multiplayer Networking Game Programming	3
CS 476	Special Problems	1-3
CS 482	Digital Forensics	3
CS 485	Network Security	3
		Subtotal: 3

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Track 5: Computer Gaming Track

CS 172	Computer Games Concepts	3
CS 312	Game Prototype Design and Implementation	3
CS 470	Artificial Intelligence	3
CS 472	Multiplayer Networking Game Programming	3
PHYS 201	Elementary Physics I	4
PHYS 202	Elementary Physics II	4
		Subtotal: 20

Choose 6 hours (two courses) from the following in consultation with advisor:

CS 172	Computer Games Concepts	3
CS 312	Game Prototype Design and Implementation	3
CS 412	Software Engineering for Computer Games	3
CS 420	Data Mining Concepts	3
CS 430	Machine Learning	3
CS 450	Computer Graphics	3
CS 460	Scientific and Parallel Computing	3
CS 470	Artificial Intelligence	3
CS 472	Multiplayer Networking Game Programming	3
CS 476	Special Problems	1-3
CS 482	Digital Forensics	3
CS 485	Network Security	3
		Subtotal: 6

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Computer Science Major – Bachelor of Science

Program Competencies

Upon graduation from the Computer Science program, students will have the ability to:

1. Analyze complex computing problems and apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate computing-based solutions to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 175	Calculus I	4
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Computer Science Major Requirements

CIS 205	Introduction to Programming - C++	3
CS 170	Introduction to Computer Science	4
CS 285	Programming in C#	3
CS 303	Data Structures	3
CS 310	Algorithms and Advanced Data Structures	3
CS 335	Theory of Programming Language	3
CS 340	Computer Architecture and Organization	3
CS 360	Operating Systems	3
CS 372	Math for Gaming and Computer Science Applications	3
CS 380	Software Engineering	3
CS 385	Advanced Programming Methods	3
CS 440	Parallel and Distributed Systems	3
CS 480	Computer Security	3
CS 499C	Capstone and Senior Thesis I	2
CS 499D	Capstone and Senior Thesis II	1
MATH 175	Calculus I	4
MATH 275	Calculus II	4
MATH 308	Discrete Mathematics	3
		Subtotal: 54

Choose one of the following:

MATH 353	Statistics	3
MATH 365	Introduction to Mathematical Statistics	3
		Subtotal: 3

Choose 9 hours from the following in consultation with advisor (six hours must be from the CS prefix):

CS 172	Computer Games Concepts	3
CS 312	Game Prototype Design and Implementation	3
CS 412	Software Engineering for Computer Games	3
CS 420	Data Mining Concepts	3
CS 430	Machine Learning	3
CS 450	Computer Graphics	3
CS 460	Scientific and Parallel Computing	3
CS 470	Artificial Intelligence	3

CS 472	Multiplayer Networking Game Programming	3
CS 476	Special Problems	1-3
CS 482	Digital Forensics	3
CS 485	Network Security	3
CIS 314	Advanced Programming-Java	3
CIS 322	Systems Security and Information Assurance	3
CIS 326	Introduction to Databases	3
CIS 405	Web Development Strategies and E-commerce	3
CIS 442	Network Administration	3
EEC 345	Microprocessor Electronics	3
EEC 480	Digital Communication and Networking	3
MATH 320	Information Theory and Codes	3
		Subtotal: 9

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Computer Science Minor

Computer Science Minor Requirements

Core Requirements

CS 170	Introduction to Computer Science	4
CIS 205	Introduction to Programming - C++	3
CS 303	Data Structures	3
CS 310	Algorithms and Advanced Data Structures	3
		Subtotal: 13

Electives

Choose nine hours (three courses) from the following:

At least two 300- or 400-level three-hour courses with CS prefix.

At most, one elective chosen from CS Area 300-level or above.

Subtotal: 9

Total Credit Hours: 22

Computer Gaming Minor

Computer Gaming Minor Requirements

Core Requirements

CS 172	Computer Games Concepts	3
CS 212	Game Implementation Technique	3
CS 312	Game Prototype Design and Implementation	3
CS 372	Math for Gaming and Computer Science Applications	3
CS 412	Software Engineering for Computer Games	3
CS 472	Multiplayer Networking Game Programming	3
		Subtotal: 18

Electives

Choose three hours from the following:

CS 450	Computer Graphics	3
CS 470	Artificial Intelligence	3
		Subtotal: 3

Total Credit Hours: 21

Engineering Technology Area – Bachelor of Science

The engineering technology program, accredited by the Association of Technology, Management, and Applied Engineering (ATMAE), provides students with the knowledge and understanding of more rigorous and analytical methods for technical problem-solving in an industrial setting. The development of such competencies is essential to the preparation of skilled technical professionals who can undertake tasks requiring greater depth and understanding of advanced technology. The engineering technology program aims to prepare a group of graduates who will fill advanced engineering technology positions in business and industry. The main objectives of the program are: 1) to develop students with enhanced technological skills; and 2) to place these students in business, industry and government as technical problem-solvers.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 174 or higher	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Electives

Choose one of the following:

PHYS 201	Elementary Physics I	4
PHYS 231	Engineering Physics I	5
		Subtotal: 4

Choose one of the following:

MATH 175	Calculus I	4
MATH 275	Calculus II	4
MATH 353	Statistics	3
		Subtotal: 3-4

Area Core Requirements

ECC 202	Statics and Dynamics	3
EEC 141	Fundamentals of Electric Circuits	3
EMM 103	Engineering Drawing	3
EMM 186	Manufacturing Processes I	3
ETM 110	Fundamentals of Computer Technology	3
ETM 120	Fundamentals of Engineering	3
ETM 300	Technology and Society	3
ETM 307	Materials Science	3
ETM 310	Engineering Economic Analysis	3
ETM 317	Systems Modeling and Simulation	3
ETM 319	Quality and Reliability Engineering	3
ETM 320	Project Management	3
ETM 330	Engineering Design	3
ETM 419	Quality Management Systems	3
ETM 421	Design of Experiments	3
ETM 422	Industrial Safety Standards and Enforcement	3
ETM 430	Operations and Facilities Management	3
ETM 499C	Senior Capstone Design Thesis	3
		Subtotal: 54

Track Requirements

Track 1: Electronics and Computer Engineering Technology

EEC 144	Network Fundamentals	3
EEC 241	Circuit Analysis	3
EEC 242	Principles of Electronic Communications	3

EEC 245	Digital Electronics	3
EEC 344	Wireless Communications	3
EEC 345	Microprocessor Electronics	3
EEC 445	Computer Electronics	3
EEC 480	Digital Communication and Networking	3
		Subtotal: 24

Choose six hours (two courses) from the following, in consultation with advisor:

EEC 243	Introduction to Programming - MATLAB	3
EEC 244	Fiber Optic Theory and Applications	3
EEC 341	Solid-State Electronic Devices and Applications	3
EEC 342	Electronic Devices and Circuits	3
EEC 346	Programmable Logic Controllers (PLC's)	3
EEC 355	Digital and Microprocessor Systems	3
EEC 400	Digital Signal Processing I	3
EEC 444	Satellite Communications	3
EEC 450	Digital Signal Processing II	3
ETM 339	Cooperative Education I	1-3
ETM 352	Energy Systems	3
ETM 439	Cooperative Education II	1-6
		Subtotal: 6

Total Credit Hours: 122-126

Engineering and Technology Management Department

Faculty

J. Curd, K. Jenab, N. Joshi, T. Ray, J. Stepp, J. Stubbs, S. Stubbs, Q. Xu, A. Zargari

Engineering and Technology Management Area - Bachelor of Science

Program Competencies

The student exiting the Engineering Management Track will:

1. Analyze and solve complex problems using engineering management tools and techniques in areas such as operations management, management of technology, project management, etc.
2. Apply theories, concepts, and principles of engineering economics in analyzing financial impacts of various key engineering decisions made by businesses.
3. Possess the human relations and leadership skills necessary for engineering management professionals, which include proficiencies in conflict resolution, cross-disciplinary team building, mentoring, etc.
4. Apply the oral, technical and written communication skills required for effective engineering management practice.
5. Demonstrate an understanding and awareness of the societal, cultural, ethical, legal and political issues prevalent in an increasingly globalized world.

The student exiting the Technology Management Track will:

1. Apply scientific and technological concepts to solving technological problems;
2. Apply theories, concepts and principles of related disciplines to develop the communication skills required for technology managers;
3. Perform as a technical management professional in business, industry and government;
4. Apply concepts and skills developed in a variety of technical and professional disciplines including computer applications, materials properties, production processes, quality control, industrial design and safety;
5. Plan, facilitate and integrate technology and problem-solving techniques in the economic enterprise;
6. Engage in applied technical research to add to the knowledge of the discipline and to solve problems which surface in the workplace.

The student exiting the Information Systems Track will:

1. Assess the need for, implement, and evaluate information technologies at the enterprise and desktop levels;
2. Demonstrate proficiency in business software applications and decision support technologies that improve performance at all organizational levels;
3. Apply problem-solving and analytical reasoning skills within the framework of information systems;
4. Recognize the strategic importance of information systems as an integral part of organizational performance;
5. Demonstrate knowledge of telecommunications, networking, and multi-user, wide-area platforms;
6. Demonstrate the ability to model organizational and quantitative processes and functions as a foundation for designing information systems solutions;
7. Demonstrate ability to apply project management tools and techniques that are essential to managing information systems projects;
8. Identify and design opportunities and strategies for IT-enabled organizational improvement and innovation; and
9. Demonstrate mastery of functional skills used in designing, building and managing databases that support information systems in an organization.

Assessment

Exit Examinations
Survey of graduating students
Survey of program alumni
Survey of employers of engineering technology graduates

Program Requirements

The following courses must be completed for all Engineering and Technology Management tracks.

General Education

General Education Courses	(See GNED Course Listings)	Variable
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Core Requirements

ETM 120	Fundamentals of Engineering	3
ETM 300	Technology and Society	3
ETM 307	Materials Science	3
ETM 310	Engineering Economic Analysis	3
ETM 319	Quality and Reliability Engineering	3
ETM 320	Project Management	3
ETM 330	Engineering Design	3
ETM 421	Design of Experiments	3
ETM 499C	Senior Capstone Design Thesis	3
MATH 353	Statistics	3
		Subtotal: 30

Choose one of the following:

MATH 152	College Algebra	3

MATH 174	Pre-Calculus Mathematics	3
MATH 175	Calculus I	4
		Subtotal: 3-4

Choose one of the following:

CIS 101	Computer Literacy	3
ETM 110	Fundamentals of Computer Technology	3
		Subtotal: 3

Choose one of the following:

PHYS 201	Elementary Physics I	4
PHYS 231	Engineering Physics I	5
		Subtotal: 4-5

Track Requirements

Track 1 - Engineering Management Track

Choose 15 hours from the following:

EMM 303	Mechanics of Materials	3
EMM 415	Computer Aided Engineering	3
ETM 317	Systems Modeling and Simulation	3
ETM 327	Organizational Management for Engineers	3
ETM 339	Cooperative Education I	1-3
ETM 398	Supervised Work Experience	1-3
ETM 430	Operations and Facilities Management	3
ETM 476	Special Problems	1-3
		Subtotal: 15

Track 2 - Technology Management Track

Choose 15 hours from the following:

ETM 339	Cooperative Education I	1-3
ETM 352	Energy Systems	3
ETM 399	Special Class	1-3
ETM 419	Quality Management Systems	3
ETM 422	Industrial Safety Standards and Enforcement	3
ETM 430	Operations and Facilities Management	3
ETM 439	Cooperative Education II	1-6
MNGT 450	Supply Chain Management	3
		Subtotal: 15

Track 3 - Information Systems Track

Choose 15 hours from the following:

CIS 311	Management Information Systems	3
CIS 320	Web Technologies and Design	3
CIS 326	Introduction to Databases	3
CIS 340	Data Networking Systems	3
CIS 365	Healthcare Informatics	3
CIS 385	Introduction to Business Analytics	3
CIS 413	IS Analysis and Design	3
CIS 490	Strategic IS Management	3
		Subtotal: 15

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Engineering Technology – Associate of Applied Science

Program Competencies

Students completing the program should be able to:

1. Apply scientific and technological concepts to solving technological problems.
2. Apply theories, concepts and principles of related disciplines to develop the communication skills required for engineering technologists.
3. Perform as a technical professional in business, industry, education and government.
4. Plan, facilitate, and integrate technology and problem solving techniques in the economic enterprise.
5. Acquire engineering knowledge in the area of specialization.

Assessment

1. Exit Examinations
2. Survey of graduating students
3. Survey of program alumni
4. Survey of employers of engineering technology graduates

Admissions Requirement

Minimum math ACT score of 20.

Note: If a student is admitted conditionally, he or she will be required to successfully complete MATH 152 before being unconditionally admitted.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	18
MATH 152 or higher	(choose one)	3
		Subtotal: 21

Refer to the Associate Degree General Education section (p. 29) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Associate Requirements

Engineering Technology Core

ETM 110	Fundamentals of Computer Technology	3
ETM 120	Fundamentals of Engineering	3
ETM 300	Technology and Society	3
ETM 320	Project Management	3
EMM 103	Engineering Drawing	3
EMM 186	Manufacturing Processes I	3
EEC 141	Fundamentals of Electric Circuits	3
ECC 101	Introduction to Construction Engineering	3
MATH 152 or higher	(choose one)	3
		Subtotal: 27

Track Requirements

Students will choose 21 hours from one of the four tracks of their choice:

- Track 1 — Design and Manufacturing Engineering Technology
- Track 2 — Construction Management and Civil Engineering Technology
- Track 3 — Electronics and Computer Engineering Technology
- Track 4 — Occupation-based Career and Technical Training

Track 1: Design and Manufacturing Engineering Technology

Choose 21 hours from the list below:

EMM 106	Thermoplastic Processing	3
EMM 170	Fundamentals of Robotics	3
EMM 203	Computer Aided Design I	3
EMM 215	Computer Aided Design II	3
EMM 270	Robotic Systems Applications	3
EMM 286	Manufacturing Processes II	3
EMM 301	Tool and Equipment Design	3
ETM 260	Thermal and Fluid Systems	3
		Subtotal: 21

Track 2: Construction Management and Civil Engineering Technology

Choose 18 hours from the list below:

ECC 203	Construction Methods and Materials I	3
ECC 204	Codes, Contracts and Specifications	3
ECC 208	Interpretation of Technical Drawings	3
ECC 305	Architectural Design	3
ECC 306	Construction Project Management	3
ECC 308	Estimating and Construction Costs	3
		Subtotal: 18

Track 3: Electronics and Computer Engineering Technology

Choose 21 hours from the list below:

EEC 144	Network Fundamentals	3
EEC 215	Basic Control Systems	3
EEC 240	Residential Wiring	3
EEC 241	Circuit Analysis	3
EEC 242	Principles of Electronic Communications	3
EEC 244	Fiber Optic Theory and Applications	3
EEC 245	Digital Electronics	3
EEC 346	Programmable Logic Controllers (PLC's)	3
		Subtotal: 21

Track 4: Occupation-based Career and Technical Training

CTE 207	Foundations of Career and Technical Education	3
CTE 388	Methods of Curriculum Development*	3
CTE 393	Methods of Career and Technical Education	3
CTE 394	Practicum in Career and Technical Education	4-8
CTE 396	Evaluation in CTE	3
EDUC 476	Content Area Literacy*	3
		Subtotal: 19

Choose one of the following:

CTE 372	Technical Media Development	3
CTE 496	Organization and Management of the Laboratory	2
EDF 211	Human Growth and Development	3
EDSP 230	Education of Exceptional Children	3
		Subtotal: 2-3

Total Credit Hours: 63-67

Engineering Technology Area – Bachelor of Science

The engineering technology program, accredited by the Association of Technology, Management, and Applied Engineering (ATMAE), provides students with the knowledge and understanding of more rigorous and analytical methods for technical problem-solving in an industrial setting. The development of such competencies is essential to the preparation of skilled technical professionals who can undertake tasks requiring greater depth and understanding of advanced technology. The engineering technology program aims to prepare a group of graduates who will fill advanced engineering technology positions in business and industry. The main objectives of the program are: 1) to develop students with enhanced technological skills; and 2) to place these students in business, industry and government as technical problem-solvers.

Program Competencies

Upon successful completion, engineering technology graduates are expected to:

1. Apply scientific concepts to the solution of technological problems.
2. Apply theories, concepts and principles of related disciplines to develop the communication skills required for engineering technologists.
3. Perform as a technical professional in business, industry, education and government.
4. Apply concepts and skills developed in a variety of technical and professional disciplines including computer applications, materials properties, production processes, quality control, industrial design and safety.
5. Plan, facilitate and integrate technology and problem-solving techniques in the economic enterprise.
6. Engage in applied technical research to add to the knowledge of the discipline and to solve problems which surface in the workplace.

Assessment

With respect to the overall competencies of the program, the Department of Engineering and Technology Management will use senior exit examinations, senior capstone projects, surveys of graduating seniors, surveys of program alumni and surveys of employers of engineering technology graduates. These various measures are meant to assess the degree to which education and training in the program serves the needs of our students, as well as the needs of employers.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 174 or higher	(choose one)	3-4
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Core Requirements

ECC 202	Statics and Dynamics	3
EEC 141	Fundamentals of Electric Circuits	3
EMM 103	Engineering Drawing	3
EMM 186	Manufacturing Processes I	3
ETM 110	Fundamentals of Computer Technology	3
ETM 120	Fundamentals of Engineering	3
ETM 300	Technology and Society	3
ETM 307	Materials Science	3
ETM 310	Engineering Economic Analysis	3
ETM 317	Systems Modeling and Simulation	3
ETM 319	Quality and Reliability Engineering	3
ETM 320	Project Management	3
ETM 330	Engineering Design	3
ETM 419	Quality Management Systems	3
ETM 421	Design of Experiments	3
ETM 422	Industrial Safety Standards and Enforcement	3
ETM 430	Operations and Facilities Management	3
ETM 499C	Senior Capstone Design Thesis	3
		Subtotal: 54

Area Electives

Choose one of the following:

PHYS 201	Elementary Physics I	4
PHYS 231	Engineering Physics I	5
		Subtotal: 4

Choose one of the following:

MATH 175	Calculus I	4
MATH 275	Calculus II	4
MATH 353	Statistics	3
		Subtotal: 3-4

Track Requirements

Track 1: Electronics and Computer Engineering Technology

The Department of Engineering and Technology Management, in conjunction with the Department of Computer Science and Electronics, offers core and supplemental courses for the Bachelor of Science Area in Engineering Technology - Electronics and Computer Engineering Technology track.

See the Department of Computer Science and Electronics (p. 170) for the electronics and computer engineering technology track program requirements.

Track 2: Mechanical and Manufacturing Engineering Technology

EMM 203	Computer Aided Design I	3
EMM 270	Robotic Systems Applications	3
EMM 303	Mechanics of Materials	3
EMM 370	Robotics Interfacing Engineering	3
EMM 386	Computer-Aided Manufacturing	3
EMM 415	Computer Aided Engineering	3
SE 488	Automation Systems	3
ETM 260	Thermal and Fluid Systems	3
		Subtotal: 24

Choose six hours (two courses) from the following, in consultation with advisor:

EEC 241	Circuit Analysis	3
EEC 243	Introduction to Programming - MATLAB	3
EEC 346	Programmable Logic Controllers (PLC's)	3
EMM 106	Thermoplastic Processing	3
EMM 215	Computer Aided Design II	3
EMM 286	Manufacturing Processes II	3
EMM 301	Tool and Equipment Design	3
EMM 315	3D Design, Modeling and Animation	3
EMM 403	Mechanism Design and Analysis	3
EMM 470	Robotics Applications Engineering	3
ETM 339	Cooperative Education I	1-3
ETM 352	Energy Systems	3
ETM 439	Cooperative Education II	1-6
		Subtotal: 6

Track 3: Construction Management and Civil Engineering Technology

ECC 101	Introduction to Construction Engineering	3
ECC 203	Construction Methods and Materials I	3
ECC 204	Codes, Contracts and Specifications	3
ECC 208	Interpretation of Technical Drawings	3
ECC 306	Construction Project Management	3
ECC 308	Estimating and Construction Costs	3
ECC 310	Principles of Surveying	3
ECC 402	Structural Design	3
		Subtotal: 24

Choose six hours (two courses) from the following, in consultation with advisor:

ECC 305	Architectural Design	3
ECC 307	Hydrology	3
ECC 405	Civil Drafting	3
ECC 410	Construction Surveying	3
ECC 415	Transportation Engineering	3
ECC 431	Sustainable Construction Methods	3
ECC 460	Geotechnical Engineering	3
EMM 303	Mechanics of Materials	3
ETM 339	Cooperative Education I	1-3
ETM 439	Cooperative Education II	1-6
		Subtotal: 6

Total Credit Hours: 122-126

Industrial Education Area (Engineering and Technology Track) – Bachelor of Science

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

Upon completion of the program, the new teacher (student) will be able to:

1. Teach technical courses in one of the following areas: construction, engineering and technology education, health science education,

information technology education, manufacturing technology, media arts or transportation education.

2. Demonstrate competence in Kentucky's teacher standards.
3. Apply teacher standards in 5-12 engineering and technology education or secondary or postsecondary occupation-based programs.

Assessment

1. Student maintaining teacher certification.
2. Yearly evaluation of occupation-based teacher turn over in the service area. Program faculty will perform the evaluation.

Engineering and Technology: Technical Track 1

Students are required to obtain a grade of "C" in all technical courses.

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152 or higher	(choose one)	3
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Area Core Requirements

ECC 101	Introduction to Construction Engineering	3
EEC 141	Fundamentals of Electric Circuits	3
EMM 103	Engineering Drawing	3
ETM 110	Fundamentals of Computer Technology	3
ETM 120	Fundamentals of Engineering	3
ETM 300	Technology and Society	3
ETM 317	Systems Modeling and Simulation	3
ETM 319	Quality and Reliability Engineering	3
ETM 320	Project Management	3
ETM 327	Organizational Management for Engineers	3
ETM 330	Engineering Design	3
ETM 419	Quality Management Systems	3
ETM 422	Industrial Safety Standards and Enforcement	3
ETM 499C	Senior Capstone Design Thesis	3
MATH 353	Statistics	3
		Subtotal: 45

Technical Track 1 Requirements

ECON 101	Introduction to Economics	3
EMM 186	Manufacturing Processes I	3
		Subtotal: 6

Technical Track 1 Electives

Choose one of the following:

ETM 339	Cooperative Education I	1-3
ETM 398	Supervised Work Experience	1-3
ETM 399	Special Class	1-3
ETM 439	Cooperative Education II	1-6
ETM 476	Special Problems	1-3
		Subtotal: 1

Professional Education

CTE 207	Foundations of Career and Technical Education	3
CTE 388	Methods of Curriculum Development*	3
CTE 392	Methods of Instructional Technology*	3
CTE 396	Evaluation in CTE	3
CTE 470	Methods of Instruction*	3
CTE 478	Student Teaching Practicum*	12
CTE 496	Organization and Management of the Laboratory	2
EDF 211	Human Growth and Development	3
EDSP 230	Education of Exceptional Children	3
EDUC 476	Content Area Literacy*	3
		Subtotal: 38

Total Credit Hours: 120

Industrial Education Area (Occupation-Based Career & Technical Education Track) – Bachelor of Science

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis

exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

Upon completion of the program, the new teacher (student) will be able to:

1. Teach technical courses in one of the following areas: construction, engineering and technology education, health science education, information technology education, manufacturing technology, media arts or transportation education.
2. Demonstrate competence in Kentucky's teacher standards.
3. Apply teacher standards in 5-12 engineering and technology education or secondary or postsecondary occupation-based programs.

Assessment

1. Student maintaining teacher certification.
2. Yearly evaluation of occupation-based teacher turn over in the service area. Program faculty will perform the evaluation.

Occupation-based Career and Technical Education: Technical Track 2

Students are required to obtain a grade of "C" in all technical courses.

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 152 or higher	(choose one)	3
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Area Core Requirements

ECC 101	Introduction to Construction Engineering	3
EEC 141	Fundamentals of Electric Circuits	3
EMM 103	Engineering Drawing	3
ETM 110	Fundamentals of Computer Technology	3
ETM 120	Fundamentals of Engineering	3
ETM 300	Technology and Society	3
ETM 317	Systems Modeling and Simulation	3
ETM 319	Quality and Reliability Engineering	3
ETM 320	Project Management	3
ETM 327	Organizational Management for Engineers	3
ETM 330	Engineering Design	3
ETM 419	Quality Management Systems	3
ETM 422	Industrial Safety Standards and Enforcement	3
ETM 499C	Senior Capstone Design Thesis	3
MATH 353	Statistics	3
		Subtotal: 45

Technical Track 2 Requirements

CTE 381	Related Science, Mathematics and Technology in Occupations	6
CTE 382	Manipulative Skills in Occupations	6
CTE 383	Knowledge of Related Subjects in Occupations	6
		Subtotal: 18

Technical Track 2 Electives

Choose one of the following:

CTE 395	Special Problems in Career and Technical Education	1-3
ETM 339	Cooperative Education I	1-3
ETM 398	Supervised Work Experience	1-3
ETM 399	Special Class	1-3
ETM 439	Cooperative Education II	1-6
ETM 476	Special Problems	1-3
		Subtotal: 1

Professional Education

CTE 207	Foundations of Career and Technical Education	3
CTE 372	Technical Media Development	3
CTE 388	Methods of Curriculum Development*	3
CTE 393	Methods of Career and Technical Education	3
CTE 394	Practicum in Career and Technical Education	4-8
CTE 396	Evaluation in CTE	3
EDUC 476	Content Area Literacy*	3
		Subtotal: 26

CTE 394 is usually taken for four hours at the associate level and taken for an additional four hours at the bachelor's level. If the student is only working on the bachelor's degree, CTE 394 must be taken for eight hours to complete necessary requirements.

Total Credit Hours: 123

Systems Engineering Area – Bachelor of Science

Admission Requirements

In order to be unconditionally admitted to the program, students must demonstrate preparation for calculus by either having a 27 Math ACT score or having successfully completed all prerequisites for MATH 175.

Program Competencies

As leaders in the systems engineering practice, graduates of the BSSE program will:

1. Analyze and solve complex problems using systems engineering tools and techniques.
2. Employ their systems engineering education to design, operate, evaluate, manage, and improve various engineering and technology systems.
3. Possess the human relations and leadership skills necessary for systems engineering professionals, which include proficiencies in conflict resolution, cross-disciplinary team building, mentoring, etc.
4. Apply the oral, technical and written communication skills required for effective systems engineering practice.
5. Demonstrate an understanding and awareness of the societal, cultural, ethical, legal and political issues prevalent in an increasingly globalized world.

Student Outcomes:

Systems Engineering graduates will possess an ability to:

1. Identify, formulate, and solve complex systems engineering problems by applying principles of multiple engineering disciplines, science, and mathematics.
2. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare as well as global, cultural, social, environmental, and economic factors.
3. Communicate effectively with a range of audiences.
4. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of systems engineering solutions in global, economic, environmental, and societal contexts.

5. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. Acquire and apply new knowledge as needed, using appropriate learning strategies.

Program Requirements

The following courses must be completed for all Systems Engineering tracks.

General Education

General Education Courses	(See GNED Course Listings)	Variable
		Subtotal: 34

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Core Requirements

CHEM 111	Principles of Chemistry I	4
ECC 202	Statics and Dynamics	3
EEC 141	Fundamentals of Electric Circuits	3
EEC 243	Introduction to Programming - MATLAB	3
EMM 186	Manufacturing Processes I	3
EMM 203	Computer Aided Design I	3
ETM 120	Fundamentals of Engineering	3
ETM 201	Technology and Life Sciences	3
ETM 310	Engineering Economic Analysis	3
ETM 319	Quality and Reliability Engineering	3
ETM 330	Engineering Design	3
ETM 421	Design of Experiments	3
ETM 499C	Senior Capstone Design Thesis	3
MATH 175	Calculus I	4
MATH 275	Calculus II	4
MATH 276	Calculus III	4
MATH 353	Statistics	3
MATH 363	Differential Equations	3
PHYS 231	Engineering Physics I	5
PHYS 232	Engineering Physics II	5
		Subtotal: 64

Track Requirements

Track 1 - Industrial Systems Track

Choose 30 hours from the following (at least 21 hours should be 300 level or higher):

EMM 103	Engineering Drawing	3
EMM 215	Computer Aided Design II	3
EMM 286	Manufacturing Processes II	3
EMM 415	Computer Aided Engineering	3
ETM 260	Thermal and Fluid Systems	3
ETM 307	Materials Science	3
ETM 317	Systems Modeling and Simulation	3
ETM 320	Project Management	3
ETM 327	Organizational Management for Engineers	3
ETM 339	Cooperative Education I	1-3
ETM 352	Energy Systems	3
ETM 419	Quality Management Systems	3
ETM 422	Industrial Safety Standards and Enforcement	3
ETM 430	Operations and Facilities Management	3
		Subtotal: 30

Track 2 - Civil Engineering Systems Track

Choose 30 hours from the following (at least 21 hours should be 300 level or higher):

ECC 101	Introduction to Construction Engineering	3
ECC 203	Construction Methods and Materials I	3
ECC 306	Construction Project Management	3
ECC 307	Hydrology	3
ECC 310	Principles of Surveying	3
ECC 402	Structural Design	3
ECC 405	Civil Drafting	3
ECC 410	Construction Surveying	3
ECC 415	Transportation Engineering	3
ECC 460	Geotechnical Engineering	3
EMM 103	Engineering Drawing	3
EMM 303	Mechanics of Materials	3
ETM 339	Cooperative Education I	1-3
		Subtotal: 30

Track 3 - Mechatronics Systems Track

Choose 30 hours from the following (at least 21 hours should be 300 level or higher):

EEC 241	Circuit Analysis	3
EEC 245	Digital Electronics	3
EEC 345	Microprocessor Electronics	3
EEC 346	Programmable Logic Controllers (PLC's)	3
EEC 355	Digital and Microprocessor Systems	3
EMM 270	Robotic Systems Applications	3
EMM 286	Manufacturing Processes II	3
EMM 370	Robotics Interfacing Engineering	3
EMM 415	Computer Aided Engineering	3
ETM 339	Cooperative Education I	1-3
SE 170	Introduction to Systems Engineering	3
SE 415	Control Systems Engineering	3
SE 443	Sensors and Actuators	3
SE 488	Automation Systems	3
		Subtotal: 30

Total Credit Hours: 122

Engineering Technology Minor

Engineering Technology Minor Requirements

Core Requirements

EMM 103	Engineering Drawing	3
EMM 186	Manufacturing Processes I	3
EEC 141	Fundamentals of Electric Circuits	3
ECC 202	Statics and Dynamics	3
		Subtotal: 12

Electives

Students will choose 12 hours from the following, as approved by the minor advisor:

EMM, ECC, EEC, or ETM Electives	(choose 12 hours)	12
		Subtotal: 12

Total Credit Hours: 24

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Teacher Education Program (TEP) and Professional Experiences

Regulations are subject to change by the Education Professional Standards Board (EPSB) and/or the University Teacher Education Council. Because of ongoing changes in the TEP, students need to work with their advisors to plan their programs.

Teacher education is a field-based program that provides extensive field experiences with students in area schools. Field experiences assist the University student in understanding the function of public school teaching and practical experiences in methodology. Each professional education course contains a required field experience component. Placements are made in cooperation with instructors and the coordinator of field experiences. Beginning September 1, 2013, all education students are required to complete 200 field experience hours prior to clinical practice/student teaching.

All education majors are required to complete field experiences prior to student teaching. Program specific requirements for field experiences are noted in the current TEP Handbook.

Students must successfully complete the PRAXIS Specialty Exam(s) and the Principles of Learning and Teaching Test with passing scores, as required by the EPSB. Program changes occur as a result of recommendations of the Kentucky Department of Education and/or the EPSB. Students should check with their advisors regarding test requirements prior to completing their programs.

All students are required to purchase Taskstream, an electronic portfolio and assessment system, beginning with EDF 207 or the designated equivalent. Transfer students should purchase Taskstream at the time of transfer to MSU if EDF 207 has already been completed.

Teacher Education Program (TEP)

Students seeking teacher certification must apply for and be admitted to the TEP. Students will be required to meet admission standards concurrent with their application to teacher education. They must select areas of concentration and/or major(s) that are certifiable.

TEP Policies Handbook

The Teacher Education Program Policies Handbook is revised annually. This booklet may be viewed and downloaded online at https://moreheadstate.edu/academics/colleges/education/teacher-education-program/clinical-practice/. The policies set forth in the current handbook must be met at the time of application.

TEP Admission Requirements

Any student applying to the TEP must first be admitted to the University. Failure to apply at the sophomore level may result in an extended program.

Transfer students who were admitted to the TEP at another Kentucky institution may submit evidence of their admission to the TEP coordinator immediately upon admission to MSU. Transfer students must meet all other criteria for admission as listed.

To gain admission to the program, the applicant must schedule an advising session with their assigned College of Education advisor to review eligibility requirements. After the advising session, the applicant may submit the electronic application for official review by the TEP Coordinator. Once the TEP Coordinator screens these items, students are required to complete an orientation with the TEP Coordinator. The Coordinator will make a recommendation to the Teacher Education Council about the TEP admission.

Transfer of appropriate education courses from another institution is contingent upon successful completion of required field experiences in the public schools and clinical experiences on campus. Documentation is required. The appropriate department in the College of Education shall approve substitution of education courses. No transfer grades below "C" are accepted in the IECE, early elementary, middle grades, or special education programs.

Education courses completed more than five years prior to readmission or initial admission in a provisional certification program shall be reviewed for program needs or deficiencies. The appropriate department in the College of Education shall conduct the review.

Retention in the TEP is dependent upon maintaining admission requirements. Any student whose admission is deferred or suspended may reapply for admission once each semester.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
    a. ENG 100 – Writing I
    b. Mathematics General Education Requirement, as required by program
    c. COMS 108 – Fundamentals of Speech Communication
    d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)

e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

TEP Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Please see your academic advisor for assistance with testing requirements.

TEP Courses

The following courses require TEP admission prior to enrollment.

See list below:

ART 301	Field Experience in Art Education*	3
ART 321	Materials and Methods for Secondary Art*	3
BIS 499C	Methods of Teaching Business and Information Technology Education*	3
CTE 392	Methods of Instructional Technology*	3
CTE 470	Methods of Instruction*	3
CTE 478	Student Teaching Practicum*	12
EDEE 321	Teaching Math in Early Elementary Grades*	3
EDEE 322	Teaching Social Studies in Early Elementary Grades*	3
EDEE 323	Language Arts for Early Elementary*	3
EDEE 331	Reading for Early Elementary Teachers*	3
EDEE 423	Supervised Student Teaching Practicum*	4-12
EDF 311	Learning Theories, Assessment and Diversity*	3
EDEM 499C	Seminar in Effective Teaching*	3
EDMG 332	Teaching Reading in the Middle Grades Content Areas*	3
EDMG 341	Teaching Math in Middle Grades*	3
EDMG 342	Teaching Social Studies in Middle Grades*	3
EDMG 343	Teaching Language Arts in Middle Grades*	3
EDMG 446	Supervised Student Teaching*	4-12
EDSE 312	Educational Methods and Technology*	3
EDSE 416	Clinical Practice*	12
EDSE 483	Classroom Organization and Management for Secondary Teachers*	3
EDSP 365	Including Students with Diverse Needs in the Classroom*	3
EDSP 373	Curriculum for Students with Moderate and Severe Disabilities*	3
EDSP 374	Teaching Students with Moderate and Severe Disabilities*	3
EDSP 375	Practicum in Education of Students with Moderate and Severe Disabilities*	2
EDSP 435	Supervised Teaching Practicum*	4-12
EDSP 437	Student Teaching Practicum in Education of Students with Moderate and Severe Disabilities*	4-12
EDSP 353	Language Arts Teaching LBD*	3
EDSP 355	Teaching Students with LBD*	3
EDSP 357	Math and Content Teaching LBD*	3
EDSP 359	Practicum in Teaching for Students with LBD*	1
EDUC 476	Content Area Literacy*	3
EDUC 482	Classroom Management and Assessment*	3
ENG 400	Studies in English for Teachers*	3
EDSE 451	Curriculum and Instruction for Social Studies*	3
EDSE 499D	Teaching Social Studies*	3
IECE 301	At-Risk Infants and Toddlers*	3
IECE 345	Preschoolers with Special Needs*	3
IECE 416	Infant/Toddler Program Planning*	3
IECE 418	Preschool Program Planning*	3
IECE 425	Clinical Practice: Infants and Toddlers and Preschool for 3-5 year olds*	12
SCI 490	Science for the Elementary Teacher*	3
SCI 491	Science for the Middle School Teacher*	3
UTCH 300	Classroom Interactions*	3
UTCH 410	Project-Based Instruction*	3

Content Areas

Early Childhood, Elementary, Middle Grades and Special Education

Students in early childhood, elementary and middle grades education must select an area in either interdisciplinary early childhood (teaching certification in birth to primary); early elementary (teaching certification in grades P-5); or middle grades (teaching certification in grades 5-9). Students in special education must select an area in either learning and behavior disorders (LBD) or moderate and severe disabilities (MSD). Within each of those areas, a student will choose dual certification in special education and either P-5 certification or 5-9 certification and may teach in both special education and general education.

There are also non-teaching majors and minors in community support services for persons with disabilities and child development.

Secondary Education Content Areas

Students seeking initial secondary certification are required to complete a bachelor's degree from the following teaching preparation programs: biological science, chemistry, English, geosciences, mathematics, physics or social studies. Students must maintain a minimum 2.75 GPA.

Other Education Content Areas

Students seeking certification in the following areas are required to complete a bachelor's degree in that area and will be certified in grades 5-12: agriculture, business and information technology and industrial education.

Students seeking certification in the following areas are required to complete a bachelor's degree in that area and will be certified in grades P-12: art, theater, and music.

Recommendation for Certification

Regulations of the Kentucky Department of Education stipulate that the applicant for a teacher's certificate (Statement of Eligibility) must be recommended by the institution offering the teacher preparation program. Recommendation for statement of eligibility will be limited to those students completing their professional semester at MSU. Since certification regulations may change, students who wish to have an institutional recommendation for a statement of eligibility must meet all certification requirements in effect at the time of their application for certification.

All applicants for initial certification (Statement of Eligibility) in Kentucky shall pass the appropriate PRAXIS Specialty Exams and Principles of Learning and Teaching Test.

Early Childhood, Elementary and Special Education Department

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Child Development & Interdisciplinary Early Childhood Education — Dr. Mee-Ryoung Shon
Community Support Services — Dr. April Miller
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Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Interdisciplinary Early Childhood Education (IECE) Area – Bachelor of Arts

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

1. Students will create learning environments based on understanding of typical and atypical child development.
2. Students will articulate strategies to build relationships with and empower families and collaborate with community agencies.
3. Students will explain the rationale for assessing children, explain how to conduct developmentally appropriate assessment, and use assessment data to inform teaching and program planning.
4. Students will use their knowledge of developmentally appropriate practices and academic subjects to design instruction and learning environments for children with and without disabilities.
5. Students will design/implement instruction and design learning environments for children with and without disabilities to demonstrate knowledge of developmentally appropriate practices and academic subject.
6. Students will examine legislation and public policy regarding children and families and will serve as advocates for children and families.
7. Students will design an early childhood program following state child care regulations and articulate management strategies.

Assessment

1. Students must maintain an overall GPA of 2.75.
2. Candidates develop a series of critical performances, which are submitted and evaluated throughout the program. Prior to clinical practice, two disposition evaluations must be filed with the Office of Quality Assurance and Accreditation. IECE New teacher Standards are used to evaluate candidate performance during field experiences and

clinical practice. Performance is evaluated by Teacher Education Candidate Record of Performance.

3. IECE candidates will be required to take the IECE PRAXIS exam. A passing score will be required by EPSB for IECE teacher certification.
4. Assessment is an ongoing activity in the teacher preparation program. As noted, teacher education courses contain program assessments which are conducted each semester. Each cohort of student teachers is observed in the field and submits the teacher performance assessment. Dispositions are reviewed each semester, and the PRAXIS exam must be taken by all our candidates prior to program completion. A synthesis of these key indicators is reviewed by the teacher education faculty on an annual basis and specific program improvement goals are identified based on these data.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable). Students must earn a "C" or better in ENG 100, COMS 108, and the GNED Math core. View the TEP Handbook at https://moreheadstate.edu/academics/colleges/education/teacher-education-program/clinical-practice/ for additional information.

Area Requirements

To successfully complete the program, a student must obtain an overall GPA of 2.75 with education methods course grades of "C" or better.

Core Requirements

EDF 207	Foundations of Education	3
ART 121	School Art I	3
BIOL 110	Inquiry Biology for Teachers	3
MUSE 222	Music for the Elementary Teachers	3
EDEC 253	Child Growth and Development	3
EDEC 254	Preschool Administration	3
IECE 301	At-Risk Infants and Toddlers*	3
IECE 311	Introduction to Early Childhood	3
IECE 345	Preschoolers with Special Needs*	3
IECE 360	Families in Early Childhood Education	3
IECE 361	Positive Child Guidance	3
IECE 416	Infant/Toddler Program Planning*	3
IECE 418	Preschool Program Planning*	3
IECE 425	Clinical Practice: Infants and Toddlers and Preschool for 3-5 year olds*	12
EDEE 305	Learning Theories and Practices in Early Elementary	3
EDEE 327	Literature and Materials for Young Readers	3
EDEC 255	Assessment of Young Children	3
EDSP 230	Education of Exceptional Children	3
EDSP 320	Language Development and Intervention for Young Children	3
EDSP 350	Intellectual and Developmental Disabilities	3
EDSP 363	Assistive Technology	3
HLTH 301	Health, Safety and Nutrition for Early Elementary	3
EDSP 370	Transdisciplinary Assessment of Students with Moderate and Severe Disabilities	3
EDSP 371	Field Experiences in Transdisciplinary Assessment and Services for Students with Moderate and Severe Disabilities	1
EDEC 412	Kindergarten Curriculum	3
EDEM 499C	Seminar in Effective Teaching*	3
		Subtotal: 85

Other Program Requirements

ART 121	School Art I	3
BIOL 110	Inquiry Biology for Teachers	3
HLTH 301	Health, Safety and Nutrition for Early Elementary	3
MUSE 222	Music for the Elementary Teachers	3
SWK 315	Child Welfare Services	3
	or	
SWK 358	Child Abuse and Neglect	3
	and	
SCI 111	Inquiry Physical Science for Teachers	3
	or	
ESS 112	Inquiry Earth Systems Science for Teachers	3
		Subtotal: 18

Free Electives

Free Electives	(chosen by student)	Variable
		Subtotal: variable

Total Credit Hours: 120

Child Development Area – Bachelor of Arts

Program Competencies

1. Students will create learning environments based on understanding of typical and atypical child development.
2. Students will articulate strategies to build relationships with and empower families and collaborate with community agencies.
3. Students will explain the rationale for assessing children, explain how to conduct developmentally appropriate assessment and use assessment data to inform teaching and program planning.
4. Students use their knowledge of developmentally appropriate practices and academic subjects to design instruction and learning environments for children with and without disabilities.
5. Students will design/implement instruction and design learning environments for children with and without disabilities to demonstrate knowledge of developmentally appropriate practices and academic subject.
6. Students will examine legislation and public policy regarding children and families and will serve as advocates for children and families.
7. Students will design an early childhood program following state child care regulations and articulate management strategies.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Area Requirements

Child Development Area Requirements

EDF 207	Foundations of Education	3
EDEC 253	Child Growth and Development	3
EDEC 254	Preschool Administration	3
EDEC 301	At-Risk Infants and Toddlers	3
EDEC 345	Preschoolers with Special Needs	3
IECE 311	Introduction to Early Childhood	3

IECE 360	Families in Early Childhood Education	3
IECE 361	Positive Child Guidance	3
EDEC 416	Infant/Toddler Program Planning	3
EDEC 418	Preschool Program Planning	3
EDEC 425	Early Childhood Practicum	9
EDEE 305	Learning Theories and Practices in Early Elementary	3
EDEE 327	Literature and Materials for Young Readers	3
EDEC 255	Assessment of Young Children	3
EDSP 230	Education of Exceptional Children	3
EDSP 320	Language Development and Intervention for Young Children	3
EDSP 350	Intellectual and Developmental Disabilities	3
EDSP 363	Assistive Technology	3
EDSP 370	Transdisciplinary Assessment of Students with Moderate and Severe Disabilities	3
EDSP 371	Field Experiences in Transdisciplinary Assessment and Services for Students with Moderate and Severe Disabilities	1
EDEC 412	Kindergarten Curriculum	3
EDEC 499C	Senior Seminar	3
		Subtotal: 70

Additional Requirements

ART 121	School Art I	3
BIOL 110	Inquiry Biology for Teachers	3
HLTH 301	Health, Safety and Nutrition for Early Elementary	3
MUSE 222	Music for the Elementary Teachers	3
PHED 315	Motor Development and Motor Learning	3
SWK 335	Families in Modern Society	3
SWK 315	Child Welfare Services	3
	or	
SWK 358	Child Abuse and Neglect	3
		Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

To successfully complete the program, a student must obtain an overall GPA of 2.0 with no "Ds" in the area.

Total Credit Hours: 120

Child Development Minor

The purpose of the child development minor is to prepare undergraduate students to work with infants and young children from birth through age eight in a variety of settings including center-based and home-based programs.

Program Competencies

Students completing the child development minor should:

1. Understand typical child growth and development.
2. Understand how to build relationships with and empower families and collaborate with community agencies.
3. Know the rationale for assessing children, how to conduct developmentally appropriate assessment, and use assessment data to inform teaching and program planning.
4. Use their knowledge of developmentally appropriate practices and academic subjects to design instruction and learning environments for children.
5. Use their knowledge of developmentally appropriate practices and academic subjects to implement instruction and learning environments for children.
6. Examine legislation and public policy regarding children and families and will serve as advocates for children and families.
7. Know how to design and manage an early childhood program following state child care regulations.

Child Development Minor Requirements

To successfully complete the program, a student must obtain an overall GPA of 2.0 with no grade of "D" in courses in the minor.

Core Requirements

EDF 207	Foundations of Education	3
EDEC 253	Child Growth and Development	3
EDEE 305	Learning Theories and Practices in Early Elementary	3
EDEC 418	Preschool Program Planning	3
IECE 311	Introduction to Early Childhood	3
IECE 360	Families in Early Childhood Education	3
IECE 361	Positive Child Guidance	3
		Subtotal: 21

Electives

Choose three hours (one course) from the following:

EDEC 254	Preschool Administration	3
EDEC 255	Assessment of Young Children	3
EDEC 416	Infant/Toddler Program Planning	3
		Subtotal: 3

Total Credit Hours: 24

Child Development Associate (CDA) Program

The child development associate program (CDA) is a training program that offers nine hours of University approved coursework. These nine hours (three three-hour courses) fulfill the mandatory 120 clock hours of training needed to apply for the CDA credential. After training is completed, students go through an assessment process designed and implemented by the National Council for Early Childhood Professional Recognition to determine their competence in working with young children. If they successfully complete the process, a CDA credential is awarded. The CDA credential may be obtained in a center-based setting at a preschool (3 to 5-year-olds) and/or infant/toddler (birth to 3) endorsement, or a family child care (birth through age 5) setting by the National Council for Early Childhood Professional Recognition (NCEEPR). For information about the CDA program, contact the Teacher Education Services for Child Care Services, 210 Ginger Hall or call 606-783-2896.

The three child development associate classes are: EDEC 125, EDEC 150 and EDEL 250.

Early Elementary Area (P-5) – Bachelor of Arts

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.

3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of "C" or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

Based on the Teacher Standards, students graduating from the P-5 program should:

1. Demonstrate knowledge of growth and development of children.
2. Be able to assess developmental and instructional needs of children.
3. Organize an effective classroom environment which will maximize learning.
4. Effectively manage classroom behavior.
5. Develop skills in planning and implementing appropriate instructional programs for children.
6. Demonstrate appropriate interaction and communication with children, parents, and other adults working in schools.
7. Describe information about options for school and home cooperation.
8. Identify appropriate professional development activities.
9. Demonstrate knowledge of the philosophical, historical, sociological and psychological basis of early elementary education.
10. Demonstrate knowledge of the provisions of the Kentucky Education Reform Act.
11. Demonstrate appropriate uses of technology to support classroom instruction.
12. Demonstrate the capacity to provide leadership within the school, the community and the profession.

Assessment

1. GPA of 2.75
2. Core Academic Skills for Educators (CASE) Testing Series and/or ACT for TEP admission
3. Completion of required field experience hours
4. PRAXIS II Exams for certification

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable). Students must earn a "C" or better in ENG 100, COMS 108, and the GNED Math core. View the TEP Handbook at https://moreheadstate.edu/academics/colleges/education/teacher-education-program/clinical-practice/ for additional information.

Area Requirements

P-5 Area Requirements

EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDEE 305	Learning Theories and Practices in Early Elementary	3
EDSP 230	Education of Exceptional Children	3
EDSP 365	Including Students with Diverse Needs in the Classroom*	3
EDEE 327	Literature and Materials for Young Readers	3
EDEE 423	Supervised Student Teaching Practicum*	12
EDEM 499C	Seminar in Effective Teaching*	3
		Subtotal: 33

Elementary I: courses to be taken concurrently

EDEL 302	Integrating Technology into the Classroom	3
EDEM 330	Foundations of Reading	3
EDSP 367	Educational Assessment	3
		Subtotal: 9

Elementary II: courses to be taken concurrently

SCI 490	Science for the Elementary Teacher*	3
EDEE 321	Teaching Math in Early Elementary Grades*	3
EDUC 482	Classroom Management and Assessment*	3
		Subtotal: 9

Elementary III: courses to be taken concurrently

EDEE 322	Teaching Social Studies in Early Elementary Grades*	3
EDEE 323	Language Arts for Early Elementary*	3
EDEE 331	Reading for Early Elementary Teachers*	3
		Subtotal: 9

EDSP 365: (taken with Elementary II or Elementary III)

Additional Requirements

ART 121	School Art I	3
BIOL 110	Inquiry Biology for Teachers	3

ESS 112	Inquiry Earth Systems Science for Teachers	3
GEO 300	World Geography	3
HLTH 301	Health, Safety and Nutrition for Early Elementary	3
MATH 231	Mathematics for the Elementary Teacher I	3
MATH 232	Mathematics for the Elementary Teacher II	3
MATH 330	Geometry for Teachers (P-9)	3
MUSE 222	Music for the Elementary Teachers	3
POLS 140	United States Government	3
SCI 111	Inquiry Physical Science for Teachers	3
HST 260	American History to 1865	3
	or	
HST 261	American History since 1865	3
		Subtotal: 36

Total Credit Hours: 120

Special Education

This program prepares individuals for professional certification for teaching students with disabilities in grades P-12. Students have the following four options for obtaining special education certification:

1. Certification for teaching students with learning and behavior disorders (LBD, P-12) and P-5.
2. Certificate for teaching students with moderate and severe disabilities (MSD, P-12) and P-5.
3. Certification for LBD P-12 and 5-9. Information found under middle grades program in Department of Middle Grades and Secondary Education.
4. Certification for MSD P-12 and 5-9. Information found under middle grades program in Department of Middle Grades and Secondary Education.

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Early Elementary (P-5) and LBD Area – Bachelor of Arts

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

1. An understanding of the varied nature of exceptional children, and of the range of special programs and resources available in the public school and the community.
2. Knowledge and skills in the development of alternative individualized curricula and in the effective teaching of academic skills, including oral and written language and the content areas.
3. An understanding of the principles and techniques of behavior management, and the ability to implement those techniques in the public school classroom.
4. An ability to measure the effectiveness of ongoing special education programs, and to critically evaluate the utility of published materials.
5. An understanding of the roles and responsibilities of special education teachers in various education program settings, including due process for the identification, placement and continuing evaluation of students in special instructional programs.
6. Knowledge of the curriculum in various areas of child development at the preschool level, together with an understanding of the characteristics of disabled preschool children and the program modifications that they require.
7. An understanding of career education as an integral part of the P-12 curriculum including knowledge of teaching methods, materials, and outside agencies typically involved in vocational training and independent living.
8. An understanding of fundamental principles of education assessment and the ability to administer a wide range of formal and informal, academic, communication, and behavioral assessment instruments.
9. The ability to interpret formal and informal assessment data in the process of forming conclusions about student needs, implementing and evaluating individualized education programs, and designing

appropriate curricula for children with learning, behavioral or developmental needs.

10. An understanding of KERA and the full inclusion of special education students with nondisabled students in regular classrooms.
11. Demonstrate appropriate uses of technology to support classroom instruction.
12. Demonstrate the capacity to provide leadership within the school, the community, and the profession.

Assessment

1. GPA of 2.75
2. Core Academic Skills for Educators (CASE) Testing Series and/or ACT for TEP admission
3. Completion of required field experience hours
4. PRAXIS II Exams for certification

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable). Students must earn a "C" or better in ENG 100, COMS 108, and the GNED Math core. View the TEP Handbook at https://moreheadstate.edu/academics/colleges/education/teacher-education-program/clinical-practice/ for additional information.

Area Requirements

P-5 and LBD Area Requirements

EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDEE 305	Learning Theories and Practices in Early Elementary	3
EDSP 230	Education of Exceptional Children	3
EDEE 327	Literature and Materials for Young Readers	3
EDSP 350	Intellectual and Developmental Disabilities	3
EDSP 353	Language Arts Teaching LBD*	3
EDSP 355	Teaching Students with LBD*	3
EDSP 356	Applied Behavior Analysis	3
EDSP 357	Math and Content Teaching LBD*	3
EDSP 359	Practicum in Teaching for Students with LBD*	1
EDSP 360	Characteristics of Individuals with Learning Disabilities and Behavior Disorders	3
EDSP 365	Including Students with Diverse Needs in the Classroom*	3
EDSP 372	Transition to Adult Life	3
EDEE 423	Supervised Student Teaching Practicum*	6
EDSP 435	Supervised Teaching Practicum*	6
EDEM 499C	Seminar in Effective Teaching*	3
		Subtotal: 55

EDSP 365 (taken with either Elementary II or Elementary III)

Elementary I: courses to be taken concurrently

EDEL 302	Integrating Technology into the Classroom	3
EDEM 330	Foundations of Reading	3
EDSP 367	Educational Assessment	3
		Subtotal: 9

Elementary II: courses to be taken concurrently

EDEE 321	Teaching Math in Early Elementary Grades*	3
SCI 490	Science for the Elementary Teacher*	3
		Subtotal: 6

Elementary III: courses to be taken concurrently

EDEE 322	Teaching Social Studies in Early Elementary Grades*	3
EDEE 323	Language Arts for Early Elementary*	3
EDEE 331	Reading for Early Elementary Teachers*	3
		Subtotal: 9

Additional Requirements

BIOL 110	Inquiry Biology for Teachers	3
ESS 112	Inquiry Earth Systems Science for Teachers	3
MATH 231	Mathematics for the Elementary Teacher I	3
MATH 232	Mathematics for the Elementary Teacher II	3
PSY 154	Introduction to Psychology	3
SCI 111	Inquiry Physical Science for Teachers	3
HST 261	American History since 1865	3
	or	
HST 271	World History Since 1500	3
		Subtotal: 21

Total Credit Hours: 121

Early Elementary (P-5) and MSD Area – Bachelor of Arts

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

1. An understanding of the varied nature of exceptional children, and of the range of special programs and resources available in the public school and the community.
2. Knowledge and skills in the development of alternative individualized curricula and in the effective teaching of academic skills, including oral and written language and the content areas.
3. An understanding of the principles and techniques of behavior management, and the ability to implement those techniques in the public school classroom.
4. An ability to measure the effectiveness of ongoing special education programs, and to critically evaluate the utility of published materials.
5. An understanding of the roles and responsibilities of special education teachers in various education program settings, including due process for the identification, placement and continuing evaluation of students in special instructional programs.
6. Knowledge of the curriculum in various areas of child development at the preschool level, together with an understanding of the characteristics of disabled preschool children and the program modifications that they require.
7. An understanding of career education as an integral part of the P-12 curriculum including knowledge of teaching methods, materials, and outside agencies typically involved in vocational training and independent living.
8. An understanding of fundamental principles of education assessment and the ability to administer a wide range of formal and informal, academic, communication, and behavioral assessment instruments.
9. The ability to interpret formal and informal assessment data in the process of forming conclusions about student needs, implementing and evaluating individualized education programs, and designing appropriate curricula for children with learning, behavioral or developmental needs.
10. An understanding of KERA and the full inclusion of special education students with nondisabled students in regular classrooms.
11. Demonstrate appropriate uses of technology to support classroom instruction.
12. Demonstrate the capacity to provide leadership within the school, the community, and the profession.

Assessment

1. GPA of 2.75
2. Core Academic Skills for Educators (CASE) Testing Series and/or ACT for TEP admission
3. Completion of required field experience hours
4. PRAXIS II Exams for certification

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable). Students must earn a "C" or better in ENG 100, COMS 108, and the GNED Math core. View the TEP Handbook at https://moreheadstate.edu/academics/colleges/education/teacher-education-program/clinical-practice/ for additional information.

Area Requirements

P-5 and MSD Area Requirements

EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDSP 230	Education of Exceptional Children	3
EDEE 305	Learning Theories and Practices in Early Elementary	3
EDEE 327	Literature and Materials for Young Readers	3
EDSP 350	Intellectual and Developmental Disabilities	3
EDSP 363	Assistive Technology	3
EDSP 365	Including Students with Diverse Needs in the Classroom*	3
EDSP 370	Transdisciplinary Assessment of Students with Moderate and Severe Disabilities	3
EDSP 371	Field Experiences in Transdisciplinary Assessment and Services for Students with Moderate and Severe Disabilities	1
EDSP 372	Transition to Adult Life	3
EDEE 423	Supervised Student Teaching Practicum*	6
EDSP 437	Student Teaching Practicum in Education of Students with Moderate and Severe Disabilities*	6
EDEM 499C	Seminar in Effective Teaching*	3
		Subtotal: 46

Elementary I (courses to be taken concurrently)

EDSP 367	Educational Assessment	3
EDEM 330	Foundations of Reading	3
		Subtotal: 6

Elementary II (courses to be taken concurrently)

EDEE 321	Teaching Math in Early Elementary Grades*	3
SCI 490	Science for the Elementary Teacher*	3
		Subtotal: 6

Elementary III - next three courses (courses to be taken concurrently)

EDEE 322	Teaching Social Studies in Early Elementary Grades*	3
EDEE 323	Language Arts for Early Elementary*	3
EDEE 331	Reading for Early Elementary Teachers*	3
		Subtotal: 9

MSD Block - next four courses (courses to be taken concurrently)

EDSP 356	Applied Behavior Analysis	3

EDSP 373	Curriculum for Students with Moderate and Severe Disabilities*	3
EDSP 374	Teaching Students with Moderate and Severe Disabilities*	3
EDSP 375	Practicum in Education of Students with Moderate and Severe Disabilities*	2
		Subtotal: 11

Additional Requirements

BIOL 110	Inquiry Biology for Teachers	3
ESS 112	Inquiry Earth Systems Science for Teachers	3
MATH 231	Mathematics for the Elementary Teacher I	3
MATH 232	Mathematics for the Elementary Teacher II	3
PSY 154	Introduction to Psychology	3
SCI 111	Inquiry Physical Science for Teachers	3
HST 261	American History since 1865	3
	or	
HST 271	World History Since 1500	3
		Subtotal: 21

Total Credit Hours: 120

Community Support Services Major – Bachelor of Arts

The department offers a non-teaching major and minor for students who would like to work in community agencies providing guidance and support to those with disabilities. This may include positions in supported living, supported employment, service coordination, or family support. The minor is particularly appropriate for individuals majoring in psychology, social work, or other areas of human services.

Program Competencies

Students will:

1. Describe the processes and procedures required under IDEA.
2. Demonstrate understanding of post-secondary transition planning for young adults with disabilities.
3. Apply the KY Department of Education's criteria for the identification of each disability area in IDEA.
4. Describe the principles of learning, social and behavioral characteristics of students with disabilities.
5. Participate in data collection, planning for behavior change, and implementing interventions with a specific student or client.
6. Develop a program plan for a client with the agency's representative, and where appropriate, the family and client's participation.
7. Implement lesson planning based on data collection.
8. Modify a program plan as needed based on data.
9. Define and utilize person-centered planning in a community setting.
10. Use professional terminology for persons with disabilities and the processes implemented for the needs of a person with disabilities.

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable).

Major Requirements

Community Support Services Requirements

EDF 211	Human Growth and Development	3
EDSP 230	Education of Exceptional Children	3
EDSP 350	Intellectual and Developmental Disabilities	3
EDSP 356	Applied Behavior Analysis	3
EDSP 360	Characteristics of Individuals with Learning Disabilities and Behavior Disorders	3
EDSP 363	Assistive Technology	3
EDSP 370	Transdisciplinary Assessment of Students with Moderate and Severe Disabilities	3
EDSP 371	Field Experiences in Transdisciplinary Assessment and Services for Students with Moderate and Severe Disabilities	1
EDSP 372	Transition to Adult Life	3
EDSP 450	Practicum in Community Support	4
SWK 230	Social Welfare History & Ethics	3
SWK 333	Beginning Helping Skills for Human Service Professionals	3
PSY 154	Introduction to Psychology	3
MSU 499C	Senior Seminar	3
		Subtotal: 41

Minor

All majors must also include a minor or additional major. See Terms to Know (p. 28).

Subtotal: 21

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Community Support Services Minor

Community Support Services Minor Requirements

Core Requirements

EDSP 230	Education of Exceptional Children	3
EDSP 350	Intellectual and Developmental Disabilities	3
EDSP 356	Applied Behavior Analysis	3
EDSP 363	Assistive Technology	3
EDSP 370	Transdisciplinary Assessment of Students with Moderate and Severe Disabilities	3
EDSP 371	Field Experiences in Transdisciplinary Assessment and Services for Students with Moderate and Severe Disabilities	1
EDSP 372	Transition to Adult Life	3
EDSP 450	Practicum in Community Support	4
		Subtotal: 23

Total Credit Hours: 23

Middle Grades and Secondary Education Department

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Program Coordinators
Middle Grades — Dr. Kimberlee Sharp
Secondary Education — Dr. Lesia Lennex
Secondary Social Studies — Dr. Sandra Riegle
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L. Lennex, S. Lindsey, D. Long, S. Riegle, K. Sharp

Middle Grades (5-9) Education Area – Bachelor of Arts

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

Based on the Teacher Standards, students graduating from the 5-9 program should:

1. Demonstrate a knowledge of the growth and development of middle grade students.
2. Describe the historical, philosophical and psychological basis of middle grade and middle school programs.
3. Demonstrate skills in planning and implementation of instruction in several different organizational patterns.
4. Accurately assess the instruction needs of students.
5. Develop an effective system for managing the classroom.
6. Relate planning for teaching to the needs of middle grade students.
7. Identify school and community resources that could be used in instruction.
8. Plan for communication with students, parents and other school personnel.
9. Establish cooperative relationships with other school personnel and skills in working in teams.
10. Develop a breadth of content knowledge.
11. Demonstrate a knowledge of the provisions of the Kentucky Education Reform Act.
12. Demonstrate appropriate uses of technology to support and enhance instruction.
13. Demonstrate the capacity to provide leadership within the school, the community and the profession.

Assessment

1. GPA of 2.75
2. Core Academic Skills for Educators (CASE) Testing Series and/or ACT for TEP admission
3. Completion of required field experience hours
4. PRAXIS II Exams for certification

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable). Students must earn a "C" or better in ENG 100, COMS 108, and the GNED Math core. View the TEP Handbook at https://moreheadstate.edu/academics/colleges/education/teacher-education-program/clinical-practice/ for additional information.

Area Requirements

5-9 Area Requirements

EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDSP 230	Education of Exceptional Children	3
EDEL 302	Integrating Technology into the Classroom	3
EDMG 330	Foundations of Reading for Middle Grades	3
EDMG 306	Development and Learning in Middle Grades	3
EDMG 332	Teaching Reading in the Middle Grades Content Areas*	3
EDMG 347	Literature and Materials for the Middle Grades	3

EDMG 446	Supervised Student Teaching*	12
EDUC 482	Classroom Management and Assessment*	3
EDEM 499C	Seminar in Effective Teaching*	3
		Subtotal: 42

Choose two courses:

EDMG 341	Teaching Math in Middle Grades*	3
EDMG 343	Teaching Language Arts in Middle Grades*	3
EDMG 342	Teaching Social Studies in Middle Grades*	3
SCI 491	Science for the Middle School Teacher*	3
SCI 391	Teaching Science in the Middle Grades	3
		Subtotal: 6

SCI 391: (Science Area Only)

Academic Component Requirements

Academic Components: Students seeking 5-9 certification must select two academic components from language arts, science, social studies and mathematics, or students may choose coursework for a single component in science. A GPA of 2.75 is required in all academic components

Science Area

ASTR 105	Your Cosmic Context	3
ASTR 125	Astronomical and Physics Methods to Explore the Universe	3
BIOL 110	Inquiry Biology for Teachers	3
BIOL 155	Environmental Biology	3
BIOL 352	Animal Natural History	3
CHEM 101	Survey of Chemistry	4
ESS 108	Physical Geology	4
ESS 112	Inquiry Earth Systems Science for Teachers	3
ESS 201	Historical Geology	3
ESS 303	Planetary Geology	3
MATH 123	Introduction to Statistics	3
PHYS 203	Fundamentals of Physics	4
SCI 111	Inquiry Physical Science for Teachers	3

Choose one science elective from the following:

AGR 311	Soil Conservation	3
BIOL 351	Plant Natural History	3
ESS 350	Geomorphology	3
ESS 376	Environmental Geology	3
ESS 379	Invertebrate Paleontology	4
GEO 361	The World of Caves	3
GEO 390	Weather and Climate	3
		Subtotal: 45

Language Arts

COMS 350	Communication, Culture and Diversity	3
ENG 280	Introduction to Teaching English in Middle and Secondary Schools	3
ENG 315	Structure of English	3
ENG 392	Teaching Writing in Elementary and Middle Schools	3

Choose one:

ENG 211	Introduction to World Literature I	3
ENG 212	Introduction to World Literature II	3

Choose one:

ENG 390	Professional Writing	3
ENG 391	Advanced Expository Writing	3

Choose one:

ENG 341	American Literature to 1865	3
ENG 342	American Literature since 1865	3
		Subtotal: 21

Social Studies

ECON 101 or 201	Economics Elective	3
GEO 241	United States and Canada	3
GEO 300	World Geography	3
POLS 140	United States Government	3
HST 260	American History to 1865	3
HST 261	American History since 1865	3
HST 270	World History to 1500	3
HST 271	World History Since 1500	3
		Subtotal: 24

Science

BIOL 110	Inquiry Biology for Teachers	3
ESS 108	Physical Geology	4
CHEM 101	Survey of Chemistry	4
PHYS 203	Fundamentals of Physics	4

Choose three hours:

SCI 111	Inquiry Physical Science for Teachers	3
ASTR 125	Astronomical and Physics Methods to Explore the Universe	3
ASTR 112	Introductory Astronomy	3
ESS 112	Inquiry Earth Systems Science for Teachers	3

Choose six hours:

BIOL 105	Biology for Your Life	3
BIOL 150	Introduction Plant Science	3
BIOL 155	Environmental Biology	3
BIOL 171	Principles of Biology	4
BIOL 234	Principles of Human Anatomy and Physiology I	3
BIOL 351	Plant Natural History	3
BIOL 352	Animal Natural History	3
		Subtotal: 24

BIOL 234 (ACT of 18 or higher)

Mathematics

MATH 231	Mathematics for the Elementary Teacher I	3
MATH 232	Mathematics for the Elementary Teacher II	3
MATH 300	Introduction to Mathematical Proofs	3
MATH 305 or MATH 353	Math Elective (choose one)	3
MATH 332	Introduction to Finite Mathematics	3
MATH 330	Geometry for Teachers (P-9)	3

Choose one set:

MATH 141	Plane Trigonometry	3
	and	
MATH 152	College Algebra	3
	or	
MATH 174	Pre-Calculus Mathematics	3
	and	
MATH 170	Introduction to Computer Science	4
		Subtotal: 24

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Middle Grades (5-9) and LBD Area – Bachelor of Arts

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of "C" or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

Based on the Teacher Standards, students graduating from the 5-9 program should:

1. Demonstrate a knowledge of the growth and development of middle grade students.
2. Describe the historical, philosophical and psychological basis of middle grade and middle school programs.
3. Demonstrate skills in planning and implementation of instruction in several different organizational patterns.
4. Accurately assess the instruction needs of students.
5. Develop an effective system for managing the classroom.
6. Relate planning for teaching to the needs of middle grade students.
7. Identify school and community resources that could be used in instruction.
8. Plan for communication with students, parents and other school personnel.
9. Establish cooperative relationships with other school personnel and skills in working in teams.
10. Develop a breadth of content knowledge.
11. Demonstrate a knowledge of the provisions of the Kentucky Education Reform Act.
12. Demonstrate appropriate uses of technology to support and enhance instruction.
13. Demonstrate the capacity to provide leadership within the school, the community and the profession.

Assessment

1. GPA of 2.75
2. Core Academic Skills for Educators (CASE) Testing Series and/or ACT for TEP admission
3. Completion of required field experience hours
4. PRAXIS II Exams for certification

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 131 or higher	MATH General Education	3
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable). Students must earn a "C" or better in ENG 100, COMS 108, and the GNED Math core. View the TEP Handbook at https://moreheadstate.edu/academics/colleges/education/teacher-education-program/clinical-practice/ for additional information.

Area Requirements

5-9 and LBD Area Requirements

EDSP 230	Education of Exceptional Children	3
EDEL 302	Integrating Technology into the Classroom	3
EDMG 330	Foundations of Reading for Middle Grades	3
EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDMG 306	Development and Learning in Middle Grades	3
EDMG 332	Teaching Reading in the Middle Grades Content Areas*	3
EDMG 347	Literature and Materials for the Middle Grades	3
EDMG 446	Supervised Student Teaching*	6
EDUC 482	Classroom Management and Assessment*	3
EDSP 350	Intellectual and Developmental Disabilities	3
EDSP 353	Language Arts Teaching LBD*	3
EDSP 355	Teaching Students with LBD*	3
EDSP 356	Applied Behavior Analysis	3
EDSP 357	Math and Content Teaching LBD*	3
EDSP 359	Practicum in Teaching for Students with LBD*	1
EDSP 360	Characteristics of Individuals with Learning Disabilities and Behavior Disorders	3
EDSP 365	Including Students with Diverse Needs in the Classroom*	3

EDSP 367	Educational Assessment	3
EDSP 372	Transition to Adult Life	3
EDSP 435	Supervised Teaching Practicum*	6
EDEM 499C	Seminar in Effective Teaching*	3
One of the following:		
EDMG 341	Teaching Math in Middle Grades*	3
EDMG 343	Teaching Language Arts in Middle Grades*	3
EDMG 342	Teaching Social Studies in Middle Grades*	3
SCI 491	Science for the Middle School Teacher*	3

Subtotal: 73

Academic Component

Academic Component: Students seeking 5-9 and LBD certification select only one component, excluding the full science component (listed under Academic Component Requirements (p. 189) for the stand alone middle grades program).

Subtotal: 21-24

Total Credit Hours: 121

Middle Grades (5-9) and MSD Area – Bachelor of Arts

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

Based on the Teacher Standards, students graduating from the 5-9 program should:

1. Demonstrate a knowledge of the growth and development of middle grade students.
2. Describe the historical, philosophical and psychological basis of middle grade and middle school programs.
3. Demonstrate skills in planning and implementation of instruction in several different organizational patterns.
4. Accurately assess the instruction needs of students.
5. Develop an effective system for managing the classroom.
6. Relate planning for teaching to the needs of middle grade students.
7. Identify school and community resources that could be used in instruction.
8. Plan for communication with students, parents and other school personnel.
9. Establish cooperative relationships with other school personnel and skills in working in teams.
10. Develop a breadth of content knowledge.
11. Demonstrate a knowledge of the provisions of the Kentucky Education Reform Act.
12. Demonstrate appropriate uses of technology to support and enhance instruction.
13. Demonstrate the capacity to provide leadership within the school, the community and the profession.

Assessment

1. GPA of 2.75
2. Core Academic Skills for Educators (CASE) Testing Series and/or ACT for TEP admission
3. Completion of required field experience hours
4. PRAXIS II Exams for certification

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	Variable
MATH 131 or higher	MATH General Education	3

Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable). Students must earn a "C" or better in ENG 100, COMS 108, and the GNED Math core. View the TEP Handbook at https://moreheadstate.edu/academics/colleges/education/teacher-education-program/clinical-practice/ for additional information.

Area Requirements

5-9 and MSD Area Requirements

EDSP 230	Education of Exceptional Children	3
EDMG 330	Foundations of Reading for Middle Grades	3
EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDMG 306	Development and Learning in Middle Grades	3
EDMG 332	Teaching Reading in the Middle Grades Content Areas*	3
EDMG 347	Literature and Materials for the Middle Grades	3
EDMG 446	Supervised Student Teaching*	6
EDUC 482	Classroom Management and Assessment*	3
EDSP 350	Intellectual and Developmental Disabilities	3
EDSP 356	Applied Behavior Analysis	3
EDSP 363	Assistive Technology	3
EDSP 365	Including Students with Diverse Needs in the Classroom*	3
EDSP 367	Educational Assessment	3
EDSP 370	Transdisciplinary Assessment of Students with Moderate and Severe Disabilities	3
EDSP 371	Field Experiences in Transdisciplinary Assessment and Services for Students with Moderate and Severe Disabilities	1
EDSP 372	Transition to Adult Life	3
EDSP 373	Curriculum for Students with Moderate and Severe Disabilities*	3
EDSP 374	Teaching Students with Moderate and Severe Disabilities*	3
EDSP 375	Practicum in Education of Students with Moderate and Severe Disabilities*	2
EDSP 437	Student Teaching Practicum in Education of Students with Moderate and Severe Disabilities*	6
EDEM 499C	Seminar in Effective Teaching*	3
One of the following:		
EDMG 341	Teaching Math in Middle Grades*	3
EDMG 343	Teaching Language Arts in Middle Grades*	3
EDMG 342	Teaching Social Studies in Middle Grades*	3
SCI 491	Science for the Middle School Teacher*	3
		Subtotal: 72

Academic Component

Academic Component: Students seeking 5-9 and MSD certification select only one component, excluding the full science component (listed under Academic Component Requirements (p. 189) for the stand-alone middle grades program).

Subtotal: 21-24

Total Credit Hours: 120

Social Studies

Social Studies Area with Teacher Certification (Secondary) – Bachelor of Arts

The Social Studies Area with Teacher Certification (secondary) prepares students for teacher certification at the secondary level (grades 8 through 12) in at least four social studies teaching fields. There is no non-teaching program. This program aligns with trends in teacher certification that foster streamlining of certification requirements and procedures. A minimum of nine semester hours in a teaching field is required for certification in Kentucky. This program consists of 60 hours of credit in history and related social sciences. Students should work closely with an advisor to receive approval for the exact content of their program of study in this program area.

TEP Admission Requirements

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Courses marked with an asterisk (*) require admission to the Teacher Education Program.

Program Requirements

1. Admission to MSU with an assigned academic advisor.
2. Pursuance of program completion leading to teacher certification.
3. Completion of at least 30 credit hours.
4. Minimum GPA of 2.75 on a 4.0 scale; or a GPA of 3.0 on a 4.0 scale on the last thirty (30) credit hours. All college courses attempted must be a part of the applicant's MSU transcript. Transcripts must reflect all transfer coursework completed to date. All transfer courses, as well as MSU credit, are used in calculating the GPA.
5. Completion of the following five core courses with grades of “C” or better:
   a. ENG 100 – Writing I
   b. Mathematics General Education Requirement, as required by program
   c. COMS 108 – Fundamentals of Speech Communication
   d. EDF 207 – Foundations of Education (CTE and Agriculture Teaching candidates may substitute CTE 207) or UTCH 100 (MSUTeach programs)
   e. EDF 211 – Human Growth and Development (IECE candidates may substitute EDEC 253) or UTCH 150 (MSUTeach programs)

Testing Requirements

TEP candidates must obtain the following scores on the ACT exam:

- Composite score of 22 or the corresponding minimum scores: Reading (20), English (18), and Mathematics (19),

OR, the following scores on the Praxis I Core Skills for Educators exam:

- Praxis Core Academic Skills for Educators: Combined 5752 Computer OR
- Praxis Core Academic Skills for Educators: Mathematics 5733 Computer (Minimum score 150) and
- Praxis Core Academic Skills for Educators: Reading 5713 Computer (Minimum score 156) and
- Praxis Core Academic Skills for Educators: Writing 5723 Computer (Minimum score 162)

An applicant may use a combination of ACT and Praxis I minimum scores to meet testing requirements. If an applicant is within five points of one or more of the corresponding minimum scores of the Praxis I assessments, the candidate may be admitted if the candidate has a minimum cumulative grade point average of 3.0 on a 4.0 scale. For information about the Praxis exams and to register for the test, please visit the Praxis website at www.ets.org/praxis.

Program Competencies

Students are expected to possess:

1. The capacity to teach at the secondary level in at least three social studies disciplines, including history.

2. Awareness of the social, political and economic systems that comprise contemporary societies as well as the growing interdependencies between societies as mediated by a global economy and shared concern for the physical environment.
3. The ability to integrate and synthesize knowledge across disciplinary boundaries in order to accumulate realistic understanding of global, national and local issues.
4. The ability to recognize and value the varied nature of the human condition across individuals and culture groups through the practice of social/historical analysis.
5. The ability to express methods of social science investigation, conduct original studies and present findings of those investigations in written and oral format.
6. The ability to assess and use electronic databases, information sites and various online resources, and to use various instructional and presentation programs.

Assessment

1. National Teachers Examination (PRAXIS)
2. Performance during professional semester
3. Capstone Course

Program Requirements

General Education

General Education Courses	(See GNED Course Listings)	33
		Subtotal: 33

Refer to the General Education section (p. 30) for a complete listing of general education requirements for the University. Program requirements that are also general education requirements will count in both places (as applicable). Students must earn a "C" or better in ENG 100, COMS 108, and the GNED Math core. View the TEP Handbook at https://moreheadstate.edu/academics/colleges/education/teacher-education-program/clinical-practice/ for additional information.

Area Core Requirements

ECON 101	Introduction to Economics	3
EDSE 451	Curriculum and Instruction for Social Studies*	3
GEO 103	Physical Geography	3
GEO 201	Map Interpretation and Analysis	3
GEO 300	World Geography	3
POLS 140	United States Government	3
HST 260	American History to 1865	3
HST 261	American History since 1865	3
HST 271	World History Since 1500	3
HST 300	Practicing History	3
EDSE 499D	Teaching Social Studies*	3
		Subtotal: 33

EDSE 499D: Offered fall semesters only and must be completed prior to professional semester.

Area Electives

Economics

ECON 201 or 202	(choose one)	3
		Subtotal: 3

History

HST 301-306 or HST 351 or HST 352	(choose one)	3
HST 311-320 or HST 372	(choose one)	3
HST 321-326 or HST 311 or HST 375	(choose one)	3
HST 340-350	(choose one)	3
		Subtotal: 12

Geography

GEO electives	Choose 3 hours from GEO	3
		Subtotal: 3

Political Science

Choose one of the following:

POLS 110	Introduction to Political Theory	3
POLS 230	Introduction to Comparative Politics	3
POLS 242	State and Local Government	3
		Subtotal: 3

Choose one of the following:

POLS 311	Politics, Justice and the Good Life	3
POLS 312	Classical and Medieval Political Thought	3
POLS 314	American Political Thought	3
POLS 316	Modern Political Thought	3
POLS 317	Feminist Political Thought	3
POLS 318	Contemporary Political Thought	3
POLS 319	Islamic Political Thought	3
POLS 321	Constitutional Law: Governmental Powers	3
POLS 322	Courts and Civil Liberties	3
POLS 324	Environmental Law and Policy	3
POLS 328	Law, Government and Privacy in the Internet Age	3
POLS 329	Comparative Constitutional Law and Politics	3
POLS 330	European Parliamentary Democracies	3
POLS 331	Politics of the Middle East and North Africa	3
POLS 332	Politics of Latin America and the Caribbean	3
POLS 333	Politics of Sub-Saharan Africa	3
POLS 334	Politics of Russia and Eastern Europe	3
POLS 335	Politics of Development and Democratization	3
POLS 336	North American Politics: United States and Canada	3
POLS 337	Politics of Asia	3
POLS 338	Politics of Transition	3
POLS 342	The American Presidency	3
POLS 343	Political Parties and Elections	3
POLS 344	Kentucky Government	3
POLS 350	Political Behavior	3
POLS 352	American Public Policy	3
POLS 354	African-American Politics	3
POLS 388	Comparative Foreign Policy	3
		Subtotal: 3

Choose one of the following:

POLS 360	International Relations	3
POLS 362	Current World Problems	3
POLS 365	United Nations and World Organizations	3
POLS 367	Politics of International Economic Relations	3
POLS 368	Human Rights and Global Justice	3
		Subtotal: 3

Professional Education Requirements

EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3

EDF 311	Learning Theories, Assessment and Diversity*	3
EDSE 312	Educational Methods and Technology*	3
EDSE 483	Classroom Organization and Management for Secondary Teachers*	3
EDSP 230	Education of Exceptional Children	3
EDSE 416	Clinical Practice*	12
EDUC 476	Content Area Literacy*	3
		Subtotal: 33

Note: Refer to the College of Education for information on application to the Teacher Education Program and application for Clinical Practice.

Free Electives

Free Electives	(chosen by student)	variable
		Subtotal: variable

Total Credit Hours: 120

Secondary Education

Secondary Education Faculty

L. Lennex, S. Riegle

The primary role of secondary education is to serve various departments of the University by offering a professional education curriculum leading to certification (Statement of Eligibility) of teachers for secondary schools.

Professional education coursework is designed to prepare students to demonstrate competency on Kentucky's New Teacher Standards developed through the Education Professional Standards Board. Courses include planned opportunities for students to engage in field experiences to learn to provide for differentiated learning experiences in diverse learning environments.

Students wishing to pursue a teaching certificate in secondary education will be assigned an advisor in their respective major content area. Students need to be aware that general education requirements may differ by content area. For specific program requirements for social studies education, see below. Students seeking certification in other secondary areas need to obtain an official program evaluation from their advisors or the content area department chairs (e.g., Department of English for inquiries about obtaining a secondary teaching certificate in English). General information about the Secondary Education TEPs may be obtained from the College of Education Advising Center in Ginger Hall B203 (606-783-9352), the Office of Quality Assurance and Accreditation in 801 Ginger Hall (606-783-2065), or from the Department of Middle Grades and Secondary Education (GH A601, 606-783-2079).

Secondary Education Certification

Students seeking teacher certification must apply for and be admitted to the Teacher Education Program (TEP). Additionally, to enroll in the clinical practice and meet state certification requirements, students must maintain a GPA of 2.75 overall (in all course work), as well as in professional education courses, with no grade lower than a "C" in professional education courses.

Requirements

Professional Education Courses

EDF 207	Foundations of Education	3
EDF 211	Human Growth and Development	3
EDF 311	Learning Theories, Assessment and Diversity*	3
EDSE 312	Educational Methods and Technology*	3
EDSE 483	Classroom Organization and Management for Secondary Teachers*	3
EDSP 230	Education of Exceptional Children	3

Professional Semester

EDSE 416	Clinical Practice*	12

Important: For information about secondary education certification, see the subject area in which certification is being sought — i.e., English.

Secondary Education Content Areas

Students seeking initial secondary certification are required to complete a bachelor's degree from the following teaching preparation programs: biological science, business, chemistry, English, geosciences, mathematics, physics, or social studies.

MSUTeach Program

MSUTeach Office

102 Lloyd Cassity Building
Morehead State University
Morehead, KY 40351
Phone: 606-783-9036
msuteach@moreheadstate.edu

MSUTeach is an innovative teacher preparation program that allows students to pursue secondary school teacher certification within a four-year biology, chemistry, earth science, mathematics, or physics degree program. While learning the subject matter of their majors, students also learn how to teach. Upon completing the program, students graduate with a bachelor’s degree and are recommended for a secondary school teaching certificate. The MSUTeach program invites students to explore their interest in teaching as early as the freshman year. The MSUTeach program supports students in developing a strong content knowledge and the skills to follow their goals to a successful career, graduate school, or to become a highly effective and innovative teacher.

For additional information, visit https://moreheadstate.edu/academics/colleges/education/msuteach/

MSUTeach Requirements

The required coursework for each content area or major is described in the College of Science section of the MSU catalog under its respective program, e.g. biology, chemistry, earth science, mathematics, or physics. Each of these programs has a MSUTeach Track.

The coursework for all MSUTeach Tracks is as follows:

1. UTCH 100: Step 1: Inquiry Approaches to Teaching (1 credit hour)
2. UTCH 150: Step 2: Inquiry-Based Lesson Design (1 credit hour)
3. UTCH 200: Knowing and Learning in Mathematics and Science (3 credit hours)
4. UTCH 250: Perspectives on Science and Mathematics (3 credit hours)
5. UTCH 300: Classroom Interactions (3 credit hours)
6. UTCH 315: Functions and Modeling (3 credit hours, not required for all programs, check your major/area)
7. UTCH 360: Research Methods (3 credit hours)
8. UTCH 410: Project-based Instruction (3 credit hours)
9. UTCH 450: Apprentice Teaching (12 credit hours)

Students must meet the following requirements to enroll in UTCH 450: Apprentice Teaching:

a. Successfully completed all MSUTeach (except UTCH 450) coursework with a grade of "C" or better.
b. Successfully completed ENG 100, COMS 108, and General Education Math with a grade of "C" or better.
c. Core Academic Skills for Educators (CASE) Testing Series and/or ACT for TEP admission.
d. Passed MSUTeach preliminary portfolio.

e. Submission of MSUTeach Application for Apprentice Teaching by March 1 for Fall Apprentice Teaching or by October 1 for Spring Apprentice Teaching.
f. Completed required field experience hours in all needed categories.
g. Earned a GPA of 2.75 (on a 4-point scale, no rounding up) on all of the following:
    - Cumulative - all coursework (including transfer credit)
    - All course work completed at Morehead State University
    - All content coursework in major or area
    - All MSUTeach courses
h. Submitted scores for the appropriate Praxis II exams.
i. Candidate must have a bona fide MSUTeach content major for teacher certification.
j. Filed the results of a current physical examination including a TB risk assessment.
k. AFTER candidate is notified of his/her school placement, contact the district central office to secure information related to that district's protocol for completing a criminal background check. A criminal background check MUST be on file within the district PRIOR to clinical practice.
l. If required by the school district, candidate must follow procedures for completing a drug screening.

For further information, contact the MSUTeach Office at 606-783-9036 or your advisor.

Courses

Note: (3-0-3) following a course title means three hours class, no laboratory, three hours credit.

ACCT - Accounting

ACCT 281 - Principles of Financial Accounting (3)

(3-0-3) An introduction to financial accounting and financial reporting for business. Topics covered include: how decision-makers use balance sheets, income statements, and other information found within financial statements; the accounting cycle; accounting and reporting of balance sheet accounts and their articulated income statement accounts.

ACCT 282 - Principles of Managerial Accounting (3)

(3-0-3) An introduction to managerial accounting and decision-making. Topics covered include: job order costing, process costing, activity-based costing, cost-volume-profit relationships, the statement of cash flows and financial statement analysis.

Prerequisite: ACCT 281

ACCT 339 - Cooperative Education III (1-8)

(1 to 8 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a junior-level status. Maximum of three hours of cooperative education credit (ACCT 339/439) available for option credit.

Prerequisite: Consent of school cooperative education coordinator.

ACCT 375 - Accounting Analysis and Financial Decision Making (3)

(3-0-3) Interpretation and development of accounting and financial data and statements incorporating spreadsheet analysis and applications.

Prerequisite: FIN 360

ACCT 381 - Intermediate Accounting I (3)

(3-0-3) The first of three intermediate-level financial accounting courses. Topics covered will include study of: the environment under which accounting standards are established; the conceptual framework for financial accounting; the accounting cycle; requirements for the presentation of the income statement, balance sheet, and statement of cash flows, time value of money concepts; and accounting for cash, accounts receivable and inventories.

Prerequisite: "C" or better in ACCT 281 and ACCT 282

ACCT 382 - Intermediate Accounting II (3)

(3-0-3) The second of three intermediate-level financial accounting courses. Topics covered will include accounting for: acquisition and depreciation of fixed assets, intangible assets, current liabilities, contingencies, long-term liabilities, stockholders' equity, retained earnings, dilutive securities, earnings per share, investments and revenue recognition.

Prerequisite: "C" or better in ACCT 381

ACCT 383 - Intermediate Accounting III (3)

(3-0-3) The third of the three intermediate-level financial accounting courses. Topics covered will include accounting for: income taxes, pensions, post-retirement benefits, leases, changes and errors, and changing prices. Other topics include the cash flow statement, basic financial statement analysis and methods of full disclosure.

Prerequisite: ACCT 381;

ACCT 387 - Income Tax (3)

(3-0-3) Income tax legislation, federal and state; returns for individuals; gross income; basis for gains and losses; capital gains and losses; dividends; deductions; withholding.

Prerequisite: "C" or better in ACCT 282

ACCT 388 - Practice in Personal Tax Accounting (3)

(3-0-3) Income tax legislation, federal and state; preparing returns for elderly and low income individuals; gross income; capital gains and losses; dividends; interest; deductions; withholdings. Available for option credit.

Prerequisite: ACCT 387

ACCT 390 - Cost Accounting I (3)

(3-0-3) Control and classification of manufacturing costs, job order and process cost analysis; materials, labor, and overhead analysis; joint and by-product costing.

Prerequisite: "C" or better in ACCT 282

ACCT 391 - Accounting Information Systems (3)

(3-0-3) Examination of accounting information systems within a context of contemporary technology. The course focuses on terms, concepts, and technology found within the accounting information systems environment; accounting cycles and control of accounting information systems; theory and practices relating to systems development; and reporting practices related to accounting information systems.

Prerequisite: "C" or better in ACCT 282

ACCT 399 - Selected Workshop Topics (1-4)

(1 to 4 hrs.) Workshops on various accounting subjects will be presented periodically. These workshops supplement the basic accounting courses. Credit toward degree programs must be approved by the student's advisor and the department chair.

ACCT 428 - Governmental Accounting (3)

(3-0-3) Study of fund accounting techniques for government accounting terminology and budgeting processes; operations of general revenue and expense, capital project, debt service, trust, intragovernment, special assessment, and enterprise funds analysis of fixed assets and liabilities, and basics of hospital and public school fund accounting.

Prerequisite: "C" or better in ACCT 282

ACCT 439 - Cooperative Education IV (1-8)

(1 to 8 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a senior-level status. Maximum of three hours of cooperative education credit (ACCT 339/439) available for option credit.

Prerequisite: Consent of school cooperative education coordinator.

ACCT 475 - Controllership (3)

(3-0-3) Emphasis on appreciation of the function of the controller in a contemporary business organization. Planning for control, reporting and interpreting operation results, evaluating new programs, tax administration and other types of required government reporting, economic appraisal of programs and the protection of assets.

Prerequisite: "C" or better in ACCT 282

ACCT 476 - Special Problems in Accounting (1-3)

(1 to 3 hrs.) This course is an independent study of an accounting problem of special interest. Students must present in writing a suggested problem and justification for the study prior to registration. Each request will be considered on its own merit in relation to the special needs of the students.

Prerequisite: Completion of 18 hours in accounting, senior standing and consent of associate dean.

ACCT 482 - Advanced Accounting (3)

(3-0-3) Accounting for requisitions, consolidations, and mergers; purchasing and pooling methods of business combinations, parent and subsidiary accounting for consolidated balance sheets; income statements; statement of changes in financial position; international operations; partnerships; installment sales; consignments; home office and branch accounting.

Prerequisite: C or better in ACCT 282

ACCT 483 - Auditing (3)

(3-0-3) Accounting principles applied to internal control systems; audit working papers; detail audit; internal audit; special and fractional audits; audit reports; tests and procedures used in auditing, ethical responsibilities of CPAs.

Prerequisite: "C" or better in ACCT 382

ACCT 485 - Forensic Accounting (3)

(3-0-3) An introduction to the fundamental concepts, as well as the more complex and developing issues of modern forensic accounting. Topics include: fraud auditing, litigation support, cybercrime and business valuations.

Prerequisite: "C" or better in ACCT 381 and ACCT 387

ACCT 486 - Accounting Internship (1-4)

(1 to 4 hrs.) On-the-job professional experience in accounting working under the supervision of a CPA arranged through cooperating public accounting firms and governmental agencies.

Prerequisite: 18 hours in ACCT and consent of associate dean

ACCT 487 - Advanced Tax Accounting II (3)

(3-0-3) Federal income tax report preparation with emphasis on partnership and corporation returns; estate and trust taxation; gift tax; special problems in taxation, tax research.

Prerequisite: "C" or better in ACCT 387

ACCT 490 - Cost Accounting II (3)

(3-0-3) Cost analysis for planning, evaluation, and control. Standard costs, direct costing, budgets, cost and profit analysis, alternative choice decisions, linear programming and capital budgeting.

Prerequisite: "C" or better in ACCT 390

ACCT 495 - Business Valuations (3)

(3-0-3) A study of the principles, applications and models for valuing various types of businesses, in various industries, and for various purposes, such as mergers, estates, litigation, etc. Also includes regulations governing business valuation reports.

Prerequisite: ACCT 383, ACCT 387 and FIN 360

AGR - Agriculture

AGR 101 - Foundations of Agriculture (3)

(3-0-3) The importance of agriculture in the community, state, nation and world, including career opportunities. Methods of solving application problems encountered in the field of agriculture using mathematical and logic skills. Emphasis will be placed on conversions and equations needed for upper level courses in agriculture.

AGR 102 - Agricultural Experience (1-2)

(1 to 2 hrs.) The course is designed to provide students with basic competencies in the agricultural sciences. Enrollment is limited to students in agricultural programs. Students are required to complete one credit hour.

AGR 108 - Elementary Horsemanship (Stock Seat) (1)

(0-2-1) Includes riding basics in relation to stock seat, such as leading a horse, bridling and saddling, grooming, mounting, dismounting, stopping, starting, turning the horse, riding at different gaits, horsemanship safety and ring etiquette, plus general overall knowledge of horses.

AGR 109 - Elementary Horsemanship (Saddle Seat) (1)

(0-2-1) Includes riding basics in relation to saddle seat, such as leading a horse, checking saddle and bridle; mounting and dismounting, stopping, starting, turning, and backing the horse, riding horses at different gaits, horsemanship safety and ring etiquette; plus general overall knowledge of horses. Equates with PHED 109.

AGR 110 - Elementary Horsemanship (Hunt Seat) (1)

(0-2-1) Includes riding basics in relation to hunt seat, such as leading a horse, checking saddle and bridle; mounting and dismounting, stopping, starting, turning, and backing the horse; riding horses at different gaits, horsemanship safety and ring etiquette; and general overall knowledge of horses.

AGR 118 - Intermediate Horsemanship (Stock Seat) (1)

(0-2-1) Includes review of elementary horsemanship (stock seat) techniques; handling horses properly from the ground; grooming and tacking-up; more advanced riding skills such as rein and leg aides; correct body position; halts, turns and figure work; trail riding; and parts of the horse, bridle and saddle, all in relation to western riding.

AGR 119 - Intermediate Horsemanship (Saddle Seat) (1)

(0-2-1) Includes review of elementary horsemanship (saddle seat) techniques; handling horse properly from ground; grooming, tacking-up; more advanced riding skills such as leg aides, rein aides and canter leads; detailed study of gaits, equipment and dress; and trail riding and showing horses, parts of the horse, bridle and saddle.

AGR 120 - Intermediate Horsemanship (Hunt Seat) (1)

(0-2-1) Intermediate review of elementary horsemanship (hunt seat) techniques; handling horse properly from ground; grooming, tacking-up; more advanced riding skills such as leg aides, rein aides and canter leads; detailed study of gaits, equipment and dress; and trail riding and showing horses, parts of the horse, bridle and saddle.

AGR 133 - Introduction to Animal Science (3)

(2-2-3) Fundamental genetics, nutrition and physiology of beef and dairy cattle, swine, sheep and horses.

Corequisite: AGR 133L

AGR 143 - Anatomy and Physiology of Livestock (3)

(3-0-3) An introduction to the comparative anatomy and physiology of common livestock species, including horses, beef and dairy cattle, swine, sheep and goats. The focus of this course will be on the structure and function of the various organ systems of livestock and how they relate to management practices.

AGR 180 - Introduction to Field Crops (3)

(2-2-3) A study of the national and international distribution and importance of major food, feed, oil, fiber and miscellaneous crops; natural

requirements and human inputs for production; current practices in production technology; crop morphology.

Corequisite: AGR 180L

AGR 185 - Current Food and Energy Issues (3)

(3-0-3) A course designed to increase the understanding, awareness, and critical analysis of contemporary food, energy and natural resource issues and their effect upon the social, political, economic and cultural aspects of society. Topics will include food safety, food production, genetically-modified foods, niche food markets, energy sources, renewable fuels, energy sustainability, global warming, limited natural resources, water rights, water quality and soil nutrient management. This course satisfies the Level 2 Knowledge NSC requirement for general education.

AGR 202 - Agricultural Plants and Humanity (3)

(3-0-3) The roles agronomic and horticultural plants play in the improved physical and mental health of individuals, in the social and cultural development of countries and communities, and in maintaining an ecologically-sound planet.

AGR 204 - Agricultural Economics (3)

(3-0-3) Analysis of contemporary problems and issues of public concern relating to food, agriculture and rural areas using the tools of fundamental economic concepts. Farm income, food prices, world food problems, natural resources, environment and rural development issues will be studied. Equates with IST 204.

AGR 205 - Farm Records (3)

(3-0-3) Development and application of farm records necessary for farm business analysis, including a study of types of inventories, depreciation schedules, cost determining and record keeping.

AGR 212 - Landscape Plants (3)

(2-2-3) A study of ornamental trees, shrubs and vines commonly used in landscaping. Emphasis is placed on identification, characteristics, adaptability and maintenance.

Corequisite: AGR 212L

AGR 213 - Landscape Design (3)

(2-2-3) An introduction to residential landscape design. Emphasis on the design process, design principles and selection of plants and man-made materials.

Prerequisite: AGR 212

Corequisite: AGR 213L

AGR 215 - Horticultural Science (3)

(2-2-3) A study of the basic principles underlying horticultural practices in fruit growing, vegetable gardening, landscape gardening and floriculture.

Corequisite: AGR 215L

AGR 221 - Equitation (3)

(1-4-3) Study and application of basic equitation techniques as it applies to various breeds and styles of riding. Figure work.

Corequisite: AGR 221L

AGR 222 - Livestock Evaluation (3)

(2-2-3) An introduction to growth, development and fattening of meat animals. Evaluation of live animal and carcass characteristics of cattle, sheep and swine.

Prerequisite: AGR 133

Corequisite: AGR 222L

AGR 224 - Greenhouse Operations (3)

(2-2-3) Study of the greenhouse industry, media, watering, fertilization, insects, diseases, chemical growth regulators, hydroponics and cost-accounting.

Prerequisite: AGR 215

Corequisite: AGR 224L

AGR 233 - Animal Diseases and Parasites (3)

(2-2-3) Study of the diseases and parasites of food animals. Mechanisms of disease processes, treatments and preventative measures for the common pathologic conditions in livestock. Environmental and management factors that impact diseases and parasites will also be studied.

Prerequisite: AGR 133

Corequisite: AGR 233L

AGR 235 - Supervised Work Experience (1-3)

(1 to 3 hrs.) A supervised work experience program for students planning careers in agriculture upon completion of the associate degree program.

AGR 239 - Cooperative Education (1-12)

(1 to 12 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a sophomore level course.

AGR 243 - Equine Health and Disease (3)

(2-2-3) A general study of the anatomy and physiology of the horse, first aid, diseases and parasites, normal and abnormal behavior and how they relate to herd health management.

Prerequisite: AGR 133

Corequisite: AGR 243L

AGR 245 - Horseshoeing (3)

(2-2-3) The fundamentals of horseshoeing; the basic use of farrier tools; anatomy and physiology of the foot, pastern and legs. Trimming feet, fitting and nailing shoes, normal and corrective shoeing.

Corequisite: AGR 245L

AGR 251 - Introduction to Agricultural Mechanics (3)

(2-2-3) Farm shop organization; shop safety; selection, use and maintenance of hand and power tools and equipment for construction and maintenance in agriculture; practical exercises and projects to develop essential skills.

Corequisite: AGR 251L

AGR 261 - Software Applications in Agriculture (3)

(2-2-3) The study of the processes used in collecting, organizing, evaluating and presenting data and information through the use of computerized data collection and analysis systems. Application software commonly used in the various disciplines of agricultural sciences.

Corequisite: AGR 261L

AGR 299 - Special Class (1-4)

(1 to 4 hrs.)

AGR 300 - Pest Management (3)

(2-2-3) Studies in the nature and management of agricultural pests. Discussion will include but not be limited to such topics as pest types; pest damage; cultural, biological and chemical management strategies; integrated pest management; economic, health and safety perspectives; and utilization techniques.

Corequisite: AGR 300L

AGR 301 - Farm Management (3)

(3-0-3) Farm organization, fitting livestock and cropping programs into a functioning unit, profit maximization and least cost combination of resources for a specified level of production.

Prerequisite: AGR 204

AGR 302 - Agriculture Finance (3)

(3-0-3) A study of farm capital structure and needs. The policy and practices of institutions offering credit to farmers are analyzed.

Prerequisite: AGR 204

AGR 303 - Land Economics (3)

(3-0-3) Farm selection and appraisal of land resources; adaptation of land as the basis for farm organization and agricultural production; study of land tenure systems; rights of ownership; recreational possibilities of nonproductive land.

Prerequisite: AGR 204

AGR 305 - Marketing of Farm Products (3)

(3-0-3) Development of geographical specializations, demand and supply schedules of agricultural products, price equilibrium, long and short run cyclical price movements, hedging in futures, demand expansion, increasing operational and pricing efficiency, specific commodity marketing.

Prerequisite: AGR 204

AGR 306 - Principles of Epidemiology in Agriculture (3)

(3-0-3) This course will offer an overview of the science of epidemiology as it relates to agriculture. Students will develop an understanding of causation and casual theory, measurements of disease occurrences, biases in study designs, random error and the role statistics play in scientific study, how to control confounding, and how epidemiology is used in a clinical setting. This course will benefit any student seeking a career in a research or clinical field.

Prerequisite: AGR 133

AGR 307 - Soils (4)

(3-2-4) Study of origin, formation, composition and classification of soils; texture, structure, water holding and movement, and nutrient holding capacities of the soil; the physical, chemical and biological properties of the soil; primary emphasis is in relation to plant growth and soil management.

Prerequisite: CHEM 101 or CHEM 111

Corequisite: AGR 307L

AGR 308 - Weed Science (3)

(2-2-3) Identification and classification of weed species, methods of reproduction and growth characteristics. Effects on livestock, crop yield and quality, and human well-being; management methods and technology.

Prerequisite: AGR 180

Corequisite: AGR 308L

AGR 310 - Stocker and Feedlot Management (3)

(2-2-3) This course will provide students with information on the stocker, receiving and feedlot segments of the beef industry, information on the management, marketing, and evaluation of these segments will be covered. This course will require intensive use of oral and written communication.

Prerequisite: AGR 133

Corequisite: AGR 310L

AGR 311 - Soil Conservation (3)

(2-2-3) Land resources, capabilities and uses; land use planning; agricultural, construction, mining, and other use effects on soil resources, geologic and accelerated erosion; soil pollution, economics of soil conservation; conservation practices and philosophies.

Corequisite: AGR 311L

AGR 312 - Soil Fertility and Fertilizers (3)

(3-0-3) A study of plant nutrient needs and uptake; soil nutrient supplying ability; nutrient - soil interactions; chemical forms; fertilizer source materials and manufacture; soil testing and fertility management; economic fertilizer use.

AGR 314 - Plant Propagation (3)

(2-2-3) A study of the principles and practices of the propagation of horticultural plants. Includes seeding, layering, cutting, division, grafting and budding.

Prerequisite: AGR 215

Corequisite: AGR 314L

AGR 315 - Fruit Production (3)

(2-2-3) Tree fruits, nuts and small fruits; varieties, sites, soils, pruning, pest control, planning and commercial marketing.

Prerequisite: AGR 215

Corequisite: AGR 315L

AGR 316 - Feeds and Feeding (3)

(2-2-3) Feeds and formulation of rations; fats, carbohydrates, proteins and their digesting; the role of minerals, vitamins and feed additives in nutrition.

Prerequisite: AGR 133 and CHEM 201 or CHEM 112

Corequisite: AGR 316L

AGR 317 - Floral Design (3)

(2-2-3) A beginning course for floral design dealing with basics in arranging fresh, dried and permanent flowers and foliage.

Corequisite: AGR 317L

AGR 318 - Landscape Maintenance (3)

(2-2-3) Basic maintenance of tree, shrub, ground cover and annual plants, including fertilizing, mulching, pests, planting, pruning, training and watering.

Prerequisite: AGR 212 and AGR 215

Corequisite: AGR 318L

AGR 319 - Herbs (3)

(2-2-3) A study of the history, culture, uses and marketing of culinary, medicinal and aromatic herbs.

Prerequisite: AGR 215 or BIOL 150

Corequisite: AGR 319L

AGR 320 - Principles of Vegetable Production (3)

(2-2-3) Principles of commercial and home vegetable production and handling. Includes soil; ecological and economic factors which influence production; producing for fresh and processing markets; varieties, pest control, cultural practices and mechanization.

Prerequisite: AGR 215

Corequisite: AGR 320L

AGR 323 - Interior Plantscaping (3)

(2-2-3) Design, selection of plants, installation and maintenance of interior landscapes in offices, homes and public buildings.

Prerequisite: AGR 215

Corequisite: AGR 323L

AGR 324 - Greenhouse Structures (3)

(2-2-3) Study of factors involved in locating, constructing and equipping a greenhouse. Studies include coverings, heating, cooling, ventilating, CO2 injectors, benches, watering and fertilizer application systems, supplemental lighting, environmental control systems and hothouses.

Prerequisite: AGR 215

Corequisite: AGR 324L

AGR 325 - Turf Management (3)

(2-2-3) Turf grass varieties, basic principles of production and their practical application to establishment, maintenance, renovation, and pest control on lawns, playgrounds and sports turf areas.

Prerequisite: AGR 215

Corequisite: AGR 325L

AGR 326 - Nursery Management (3)

(2-2-3) Selection, systems of culture, harvesting and management of ornamental trees, shrubs and vines.

Prerequisite: AGR 215 and AGR 314

Corequisite: AGR 326L

AGR 327 - Advanced Landscape Design (3)

(2-2-3) Selection and location of ornamental plants for large properties such as schools, playgrounds, estates, apartment complexes and factories. Preparing specifications and bids.

Prerequisite: AGR 212 and AGR 213

Corequisite: AGR 327L

AGR 328 - Floral Crop Production (3)

(2-2-3) Production of bedding plants, flowering potted plants, cut flowers and foliage plants.

Prerequisite: AGR 215 and AGR 224

Corequisite: AGR 328L

AGR 329 - Advanced Stock Seat Horsemanship (3)

(1-4-3) Develop skills of performance equitation. Specific skills needed in the training or showing of western horses, halter, pleasure and reining.

Prerequisite: AGR 221

Corequisite: AGR 329L

AGR 330 - Livestock Improvement (3)

(2-2-3) Study of the principles, practices, and procedures of animal breeding, selection, and mating systems along with their application for farm livestock production and improvement.

Prerequisite: AGR 133

Corequisite: AGR 330L

AGR 332 - Advanced Saddle Seat Horsemanship (3)

(1-4-3) Develop skills of performance equitation. Specific skills needed in driving, training and showing of saddle seat style horses.

Prerequisite: AGR 221

Corequisite: AGR 332L

AGR 333 - Advanced Hunt Seat Horsemanship (3)

(1-4-3) Develop skills of performance equitation. Specific skills needed in training or showing of hunter horses, jumping and course design.

Prerequisite: AGR 221

Corequisite: AGR 333L

AGR 335 - Equitation Teaching (3)

(2-2-3) The techniques of horsemanship and methods of equitation instruction.

Prerequisite: AGR 221

Corequisite: AGR 335L

AGR 336 - Dairy Production (3)

(2-2-3) A general study of the factors involved in the management of a dairy cow herd, including herd operation, records, breeding programs, diseases and principles of nutrition.

Prerequisite: AGR 133

Corequisite: AGR 336L

AGR 337 - Poultry Production (3)

(2-2-3) Principles of poultry production including common breeds of chickens, incubation, breeding, housing, nutrition, diseases and general management practices.

Prerequisite: AGR 133

Corequisite: AGR 337L

AGR 338 - Livestock Judging (3)

(1-5-3) Study and practice of the principles of livestock judging. The student will be expected to gain an understanding of phenotypic appearance as it relates to important economic traits and genetic improvement of livestock.

Prerequisite: AGR 222

Corequisite: AGR 338L

AGR 339 - Cooperative Education (1-12)

(1 to 12 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a junior level course.

AGR 342 - Horse Production (3)

(2-2-3) A general study of the history and development of breeds of the horse, the relationship of form to function, horse selection, horse breeding, feeding and genetics.

Prerequisite: AGR 133

Corequisite: AGR 342L

AGR 343 - Beef Production (3)

(2-2-3) The history, development and distribution of breeds; sources of cattle and carcass beef; production and distribution practices in steer feeding; commercial and purebred breeding herds.

Prerequisite: AGR 133

Corequisite: AGR 343L

AGR 344 - Swine Production (3)

(2-2-3) History, development and distribution of types of breeds; management practices, including disease problems in commercial and purebred herds.

Prerequisite: AGR 133

Corequisite: AGR 344L

AGR 345 - Sheep Production (3)

(2-2-3) History, development, and distribution of types and breeds; selection, breeding, feeding and management of sheep; production and handling of wool.

Prerequisite: AGR 133

Corequisite: AGR 345L

AGR 350 - Farm Power and Machinery Management (3)

(2-2-3) Selection, operation, maintenance, and servicing of agriculture power and machinery units.

Corequisite: AGR 350L

AGR 351 - Emerging Technology in Agriculture (3)

(2-2-3) This course provides an overview of current and emerging technology in agriculture. Topics will include various types of sensors, other computer-based technology, and their respective uses in livestock, horticulture, and field crop production.

Prerequisite: AGR 261

Corequisite: AGR 351L

AGR 355 - Applied Domestic Animal Behavior (3)

(3-0-3) A study of animal behavior. Implications of the management and training of animals on their behavior and welfare.

Prerequisite: AGR 133

AGR 360 - Commercial Agricultural Industries (3)

(3-0-3) This course will provide students with an opportunity to travel to an area(s) of the United States and tour commercial agricultural industries. Travel expenses will be distributed among the students participating. Locations and tours will vary.

AGR 361 - Fundamentals of Precision Agriculture (3)

(3-0-3) This course is structured to provide an understanding of the technology available to support precision agriculture and data management planning applications. Topics discussed will include autonomous vehicles, GPS, soil and crop proximal sensors, drones, imagery and mapping, variable rate control systems, and yield monitors.

Prerequisite: AGR 261

AGR 377 - Principles in Agricultural Leadership (3)

(3-0-3) A study of leadership concepts in agriculture. Leadership styles, types of management, group dynamics, managing change, and conflict resolution will be covered in an applied format within the agriculture industry.

Prerequisite: AGR 101

AGR 378 - Principles of Food Science (3)

(3-0-3) A broad study of the food sciences including nutritional values, food processing and storage, consumer preferences, microorganisms, food-borne illnesses and the regulatory agencies involved. This course will enable any student to be better educated about the food they consume.

AGR 380 - Equine Management (3)

(2-2-3) Management and practices in various horse operations as they relate to buildings and equipment, sanitation, pasture and feed selection, supervision of laborers, public relations, legalities and liabilities, and record keeping systems.

Prerequisite: AGR 243

Corequisite: AGR 380L

AGR 384 - Forage Crops (3)

(2-2-3) The distribution of various forage crops and their adaptations to soil and climate; seeding rates and mixtures; productivity; pest control; and preservation and utilization methods.

Prerequisite: AGR 180

Corequisite: AGR 384L

AGR 385 - Agribusiness Management (3)

(3-0-3) Management of the agribusiness functions, responsibilities, and operational characteristics unique to an agriculturally related business, particularly cooperatives.

Prerequisite: AGR 204

AGR 386 - Introduction to Agricultural Policy (3)

(3-0-3) A history of agricultural policy and policy making; defining the problems and their settings, government participation in supply and demand for agricultural products.

Prerequisite: AGR 204

AGR 402 - Advanced Agricultural Experience (1-12)

(1 to 12 hrs.) An independent study course that will vary based on agreed upon requirements between the student and course instructor. The course is designed to provide students with advanced competencies and agricultural skills in the option they have chosen. Enrollment is limited to students in agricultural programs. Course is repeatable for credit up to a maximum of 12 hours. Students are only required to complete three hours of the course. Petition is required to enroll in the course.

AGR 405 - Farm Business Analysis (3)

(2-2-3) A basic course in the applicability of farm records to the efficiency analysis of whole farms and of specific enterprises. Actual University Farm enterprises will be used to provide the data source for laboratory work.

Prerequisite: AGR 301

Corequisite: AGR 405L

AGR 410 - Principles of Meat Science (3)

(3-0-3) This course will provide students with information on meat produced by cattle, swine, sheep, poultry, seafood and other species on a local, national and international level, as well as information on the conversion of muscle to meat and the inspection, grading and evaluation of these products. This course will require intensive use of oral and written communication.

Prerequisite: AGR 133 and AGR 143

AGR 412 - Conservation Workshop (3)

(2-2-3) Development of the conservation movement with broad treatment of the basic natural resources, including land, water, air, minerals, forests and wildlife. May be repeated, but not to exceed total of six hours.

Corequisite: AGR 412L

AGR 415 - Animal Nutrition (3)

(2-2-3) Chemistry, metabolism and physiological functions of nutrients; digestibility, nutritional balances and measures of food energy.

Prerequisite: AGR 316

Corequisite: AGR 415L

AGR 420 - Farm Animal Reproduction (3)

(2-2-3) An examination of female and male anatomy and physiology of farm animals as it relates to reproduction. Management and environmental impacts on reproduction will be analyzed.

Prerequisite: AGR 133 and AGR 143

Corequisite: AGR 420L

AGR 439 - Cooperative Education (1-12)

(1 to 12 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a senior level course.

AGR 444 - Animal Health and Therapeutics (3)

(3-0-3) This course is designed to study the mechanisms of disease processes, treatments, and preventative measures for pathologic conditions in livestock and horses, through a problem-based learning format. Students are given weekly case scenarios and are provided with realistic client historical information. As different aspects of the case unfold, students begin to discover learning issues about a particular part of the case. The student is expected to research learning issues and report to the class their findings. Although a diagnosis is made in each case, the

students are evaluated on their level of knowledge about the disease process, their participation in clinical discussions, and the focus of their methodology for determining appropriate diagnostic testing. The course will cover diseases from a regional, national, and global aspect, and will also address the bio-security issues necessary to prevent these diseases from entering our country or region. Case studies will also be used to study current therapeutic uses of biologics and medications. Equates with VET 444.

Prerequisite: AGR 233 or VET 399C or equivalent

AGR 461 - Remote Sensing and GIS in Agriculture (3)

(2-2-3) This course will apply remote sensing, geographic information systems (GIS), and unmanned aerial systems (UAS) to agriculture. It utilizes the capabilities of specialized hardware and software to map and analyze data that can then be used to solve problems and enhance decision-making in agriculture.

Prerequisite: AGR 361

Corequisite: AGR 461L

AGR 474 - Adult and Young Farmer Education (3)

(3-0-3) The principles and techniques needed in organizing and program planning in post high school vocational agricultural education and conducting young farmer and adult farmer classes.

AGR 476 - Special Problems (1-3)

(1 to 3 hrs.) Permits a student to do advanced work as a continuation of an earlier experience or to work in an area of special interest. Topic for investigation must be selected and approved by advisor prior to registration.

AGR 480 - Equine Breeding and Reproduction (3)

(2-2-3) A thorough study of the anatomy and physiology of reproduction in the stallion and the mare with practical emphasis on teasing, breeding and foaling techniques, semen collection, insemination and evaluation, along with daily record keeping.

Prerequisite: AGR 243 and AGR 143 or VET 108

Corequisite: AGR 480L

AGR 485 - Teaching Agricultural Mechanics (3)

(3-0-3) Objectives with methods, equipment and management of the shop; organization of facilities for high school and vocational technical programs.

AGR 486 - Planning Programs in Vocational Agriculture (3)

(3-0-3) Organization and analysis of the program of vocational agriculture. Departmental program of activities, summer programs, advisory committees and Future Farmers of America activities.

AGR 492 - Supervision in Agriculture (3)

(3-0-3) The principles and techniques needed in individual group supervision of vocational agricultural programs.

AGR 499C - Senior Seminar in Agriculture (3)

(3-0-3) Students may conduct research projects or utilize literature surveys leading to written and oral reports in their area of interest in agriculture. Guest lecturers and faculty will present the most current information in agriculture.

APS - Appalachian Studies

APS 201 - Introduction to Appalachia (3)

(3-0-3) A multidisciplinary introduction to the Appalachian region's natural environment, history, culture and sociopolitical structures within local, national and global contexts. Particular emphasis will be given to contemporary issues and community building. This course satisfies the Level 3 Ethics and Civic Engagement SBS requirement for general education.

ART - Art

ART 100 - 2D Design and Color Foundations (3)

(2-2-3) An introduction to fundamental elements and principles of two-dimensional design as well as artistic and scientific principles of color. The course covers, in a direct way, "why" an artist puts "what" "where." This course addresses design considerations such as: space and depth, scale, emphasis, balance, repetition, variation, symmetry, asymmetry, pattern and other elements of image form. These ideas are considered alongside color by examining how color affects these structures in an image. A variety of media is experimented with including paint, ink, pencil and paper, collage, digital media and others. This course is required for, but not limited to, art majors.

ART 101 - Two-Dimensional Foundation (3)

(2-2-3) An introduction to fundamental elements and principles of two-dimensional design. This course addresses the arrangement of formal elements within the picture plane. A variety of media are used including paint, ink, pencil, and paper.

ART 102 - 3D Foundations (3)

(2-2-3) An introduction to three-dimensional concepts of form, space, surface and structure. Principles are taught employing a variety of methods, techniques and materials, such as cardboard, modeling clay, paper and wire.

ART 103 - Color Foundation (3)

(2-2-3) An introduction to the fundamentals of artistic and scientific principles of color. This course addresses elements of color and relationships between colors. The primary medium used will be acrylic paint.

ART 109 - Digital Foundations (3)

(2-2-3) This course is an introduction to creative problem-solving techniques using digital tools. The course will cover how contemporary software and digital devices create new opportunities for creative approaches in two-dimensional media such as photography, drawing, and design. The course will balance design and art-based brainstorming and problem-solving approaches. The course is required for, but not limited to, art majors, minors and convergent media students.

ART 112 - Drawing Foundations (3)

(2-2-3) An introduction to object and subjective drawing. Emphasis is placed on accurate seeing and technical competence at depicting reality. A variety of media is used including charcoal, ink, pastel and pencil.

ART 121 - School Art I (3)

(2-2-3) Introduction to art and to the teaching of art in the lower (1-3) elementary grades. Field experience required.

ART 160 - Understanding the Visual Arts (3)

(3-0-3) An examination of visual art from various cultures. It includes a study of materials, techniques, subjects, styles, issues, functions and meanings related to visual art from many different cultures and periods around the globe. This course satisfies the Level 2 Knowledge HUM requirement for general education.

ART 200 - Introduction to Arts Administration (3)

(3-0-3) Introduction to arts administration theory and practice; nonprofit management; marketing and public relations; volunteer and board relationships; fundraising and development; advocacy; community relations; arts education; special events coordination; and other relevant topics.

ART 201 - Arts Entrepreneurship (3)

(3-0-3) Arts entrepreneurship theory and practice through business and funding structures, product development, profit/pricing models and promotion.

ART 205 - Graphic Design I (3)

(3-0-3) This course introduces history, theory, concepts and techniques required in graphic design. Students are introduced to layout; color theory and use; design, photo and illustration techniques; and exploration of media in respect to digital design. This course will also integrate concepts regarding the production process including prepress, printing and other production techniques and distribution.

Prerequisite: ART 100 AND ART 109

ART 206 - Websites I (3)

(2-2-3) This course is an introduction to the fundamental concepts and technical skills in designing, creating and maintaining functioning websites. While considering the aesthetics and design of websites, emphasis is on the technical aspects of learning to use Dreamweaver and Fireworks. Students will utilize Hypertext Markup Language (HTML), XHTML, Cascading Style Sheets (CSS), PHP (Hypertext Preprocessor) and other current or emerging software programs, blogs and social media. Areas of instruction include audience analysis, hierarchy layout and design techniques, software integration and publishing.

Prerequisite: ART 109

ART 207 - Websites II (3)

(2-2-3) In this course, students will bring animation to the web using Flash, HTML5 and JavaScript. The course explores the rich animation capabilities of all three web technologies, covering both basic and advanced interactivity. Students will create content for the web, mobile devices, CDs, videos and stand-alone desktop applications. Techniques emphasizing editing and compression methods will also be explored. This course gives students enough proficiency to create exciting web animation that communicates the unlimited potential of the web environment.

Prerequisite: ART 206 or permission of instructor

ART 214 - Painting Techniques I (3)

(2-2-3) Introduction to oil painting, materials and methods, arrangement of the palette; and the use of a variety of different subjects.

Prerequisite: ART 103 or ART 100

ART 221 - School Art II (3)

(2-2-3) Philosophy and methods of teaching art to children in the elementary grades; a study of materials, media and tools. Field experience required.

ART 223 - Innovate: Introduction to Creativity and Design (3)

(3-0-3) Innovation theory and practice through creativity and design. Special emphasis on "human centered design" through the process of inspiration, ideation, and implementation. Equates with ETM 223.

ART 245 - Ceramics I (3)

(2-2-3) Introduction to ceramic forms in hand building, wheel-throwing, glazing and decorative techniques.

ART 263 - World Arts (3)

(3-0-3) A multidisciplinary introduction to world aesthetic traditions within cultural and historical contexts. This course satisfies the Level 3 Global Cultures HUM requirement for general education.

ART 264 - Ancient-Medieval (3)

(3-0-3) An examination of ancient Near Eastern, Egyptian, Greek, Roman, and Medieval art. It includes a study of materials, techniques, subjects, styles, issues, functions and meanings. Equates with IST 264.

ART 265 - Renaissance-Modern (3)

(3-0-3) An examination of art from the Renaissance to the present. It includes a study of materials, techniques, subjects, styles, issues, functions and meanings. Equates with IST 265.

ART 294 - Sculpture I (3)

(2-2-3) Creative experiences in the techniques, media, and tools of sculpture, work in stone, wood, metal, clay and plaster.

Prerequisite: ART 102

ART 295 - Sophomore Exhibition and Review (0)

(0-0-0) Only offered in spring semesters. Students will submit a required number of professionally presented works for the Sophomore Exhibition and participate in the Sophomore Review. Completion of Sophomore Exhibition and Review is a program requirement for all Art and Design students in all Art and Design programs, including Art Area (studio) BA and BFA and Art Area Teaching BA and BFA.

Prerequisite: Student must be a sophomore (>30<46 credit hours earned) in the BA or BFA Art and Design program, or by permission for transfer students.

ART 300 - Teaching Elementary and Middle School Art (3)

(2-2-3) Philosophical and curricular aspects of art for elementary and middle school. This course includes field experience.

ART 301 - Field Experience in Art Education (3)

(1-2-3) *Admission to TEP is required.* Clinical and field experiences required in the P-12 setting. Two full days of weekly field experiences in public schools in nearby communities.

ART 302 - Typography (3)

(2-2-3) An introduction to the relevance of letterforms in graphic design and visual culture. This studio course uses digital methods to address the language of type and its effective use. Students will study the language of type through its history and application, gaining a strong working knowledge of this essential element to graphic design.

Prerequisite: ART 109 or ART 205

ART 304 - Drawing II (3)

(2-2-3) A continuation of ART 112.

Prerequisite: ART 204 or ART 112

ART 305 - Graphic Design II (3)

(2-2-3) A study of three-dimensional design with emphasis on product and package design.

Prerequisite: ART 109 and ART 205

ART 306 - Websites III (3)

(2-2-3) Application of the principles of graphic design to web publishing. Emphasis on creative website design solutions through image preparation, typography and color design for individual and corporate clinics.

Prerequisite: ART 109 and ART 305

ART 307 - Arts Administration and Entrepreneurship Practicum (1)

(1-0-1) Experiential learning in arts administration through placement in the field.

Prerequisite: ART 200

ART 309 - Computer Art (3)

(2-2-3) This course is designed to give students at an advanced level the opportunity to work with digital photography, digital image editing and management, as well as printing. The course focuses on Adobe Photoshop and its use, application and integration with other applications and peripherals. Students will be given instruction and guidance on advanced level software practices and techniques. Assigned projects will test their

abilities to retain information about specific camera and software operations, as well as their creative ability to solve problems.

ART 310 - Puppetmaking (3)

(2-2-3) The historical and contemporary significance of puppetry including the techniques and methods of construction and production.

ART 314 - Painting Techniques II (3)

(2-2-3) Painting from still life and landscape with emphasis on creative interpretation and expression.

ART 316 - Watercolor I (3)

(2-2-3) Introduction to watercolor media and methods and to the use of various subjects.

ART 320 - Survey of Graphic Design (3)

(3-0-3) An exploration of the origins and evolution of graphics and graphic design from ancient civilization to present. Movements, styles and new developments shaped by technology will be investigated, as well as graphic designs and designers that influenced the ongoing evolution of the discipline.

ART 321 - Materials and Methods for Secondary Art (3)

(2-2-3) *Admission to TEP is required.* Presentation of the background, philosophy, and techniques for the teaching of art in the secondary school. Field experience is required.

ART 333 - Design Layout and Pre-Press (3)

(2-2-3) This course is designed to give students an opportunity to learn essential layout and pre-press and techniques for print projects using Adobe® InDesign and Adobe® Acrobat. Building on principles learned in ART 205, students will utilize InDesign to create marketing and advertising materials for print. Techniques emphasizing text and image formatting, color and pre-press will be explored. The course will balance art, design and print related problem solving.

Prerequisite: ART 205 or permission of instructor

ART 345 - Ceramics II (3)

(2-2-3) Individual work in wheel-throwing, hand building, operation of kilns and basic experiments in glazing.

Prerequisite: ART 245

ART 351 - Intaglio Printmaking (3)

(2-2-3) Creative experiments in intaglio printmaking on stone. Techniques include line etching, aquatint, soft ground, dry point and monotype on zinc and copper.

Prerequisite: ART 101 or ART 100

ART 352 - Lithographic Printmaking (3)

(2-2-3) Creative experiments in the techniques of lithographic printmaking on stone. Processes include crayon, rubbing ink, liquid tusche, acid tint and transfer.

Prerequisite: ART 101 or ART 100

ART 361 - Ancient Art (3)

(3-0-3) The history of Western painting, sculpture and architecture from prehistoric times until the beginning of the Christian era.

ART 362 - Medieval Art (3)

(3-0-3) The history of European painting, sculpture and architecture from the beginning of the Christian era until c. 1300.

ART 363 - Renaissance Art (3)

(3-0-3) The history of European painting, sculpture and architecture from c. 1300 until c. 1525.

ART 364 - Mannerist and Baroque Art (3)

(3-0-3) The history of European painting, sculpture and architecture from c. 1525 until c. 1750.

ART 373 - Basic Black and White Photography (3)

(2-2-3) Practical introduction to basic camera and darkroom techniques of black and white photography. Areas covered include camera operation, film exposure and development, enlarging and print presentation.

ART 375 - Introduction to Digital Photography (3)

(2-2-3) This course introduces students to the fundamentals of making digital fine art photographs. Students will learn the technical aspects of the digital single-lens reflex 35mm camera and software, as well as the aesthetic and conceptual perspectives of creating photographs.

ART 394 - Sculpture II (3)

(2-2-3) Studio problems involving the manipulation of various sculpture media.

Prerequisite: ART 294

ART 399 - Selected Topics (1-3)

(1 to 3 hrs.) Specialized offerings in art for undergraduate students. The purpose of these special courses is to supplement regular course offerings in art.

ART 400 - Internship (1-12)

(1 to 12 hrs.) Experience in a working situation, allowing the student access to instruction and practical experiences not normally available in the art department curriculum.

ART 401 - Arts Administration Practicum II (2)

(2-0-2) Experiential learning in arts administration through placement in the field.

Prerequisite: ART 200 and ART 307

ART 404 - Drawing III (3)

(2-2-3) A serious search into the expressive possibilities of the figure; anatomical investigation of parts, variety of media and techniques leading to individual interpretation.

Prerequisite: ART 304

ART 405 - Graphic Design III (3)

(2-2-3) Introduction to the use of graphics as a means of visual communication with emphasis on design concepts. Studio assignments on problems related to the community, society, industry and commerce.

Prerequisite: ART 305

ART 406 - Graphic Design IV (3)

(2-2-3) Advanced work in advertising design with emphasis placed on the commercial application of design principles as they relate to the organization of copy and illustration for use by media.

Prerequisite: ART 405

ART 407 - Commercial Illustration I (3)

(2-2-3) Two- and three-dimensional forms and the various techniques for rendering them for use in commercial design. Emphasis is placed on realistic drawing and presentation of objects.

Prerequisite: ART 112 and ART 205

ART 408 - Commercial Illustration II (3-6)

(3 to 6 hrs.) The continuation of studies in the area of commercial illustration. A more comprehensive study of different media and illustration techniques. May be repeated for credit.

Prerequisite: ART 407

ART 409 - Airbrush (3)

(2-2-3) An introduction to use of the airbrush and its application to design concepts including shape, line, value, texture and composition. A variety of airbrush related materials are used. Techniques, skill and perceptual development are emphasized.

Prerequisite: ART 205 and ART 214

ART 410 - Motion Graphics (3)

(2-2-3) This course is designed to give students an opportunity to learn and work with programs that will allow them to animate their ideas. The course begins with more traditional cell-by-cell and digital camera and video techniques and then progresses to non-linear video editing (Adobe Photoshop & After Effects) and concepts in vector animation (Adobe Flash).

Prerequisite: ART 309 or Adobe Certification in Photoshop or consent of department

ART 411A - Drawing IV (3)

(2-2-3) Advanced studio in figure drawing. Further exploration of figure drawing concepts and media with emphasis on creative interpretation and expression.

Prerequisite: ART 404

ART 411B - Drawing IV (3)

(2-2-3) Advanced studio in figure drawing. Further exploration of figure drawing concepts and media with emphasis on creative interpretation and expression.

Prerequisite: ART 404

ART 414 - Painting Techniques III (3)

(2-2-3) Further exploration of different mediums and direction toward an individual approach. Painting from a variety of subjects; technical investigation and creative interpretation emphasized.

ART 415 - Painting Techniques IV (3)

(2-2-3) Experiences leading toward individual achievements in styles and techniques.

ART 430 - Advanced Art Education Studies (1-6)

(1 to 6 hrs.) The student will research a selected topic, engage in a related field experience and apply the research to the experience (theory to practice). Subject areas include pedagogy and curricular strategies such as service learning and community engagement, exceptional students in the P-12 setting, visual culture and media literacy, after school art programs, social and behavioral issues, and performing objects as a mediating teaching tool.

ART 431 - Advanced Art History Studies (1-6)

(1 to 6 hrs.) An investigation of theoretical, conceptual, formal, sociopolitical, and/or economic concerns related to the making of art within cultural and historical context. This study will result in a comprehensive body of work (minimally a research paper, but optionally also artwork, and/or service-learning project).

ART 432 - Advanced 2-D Studies (1-6)

(1 to 6 hrs.) A thorough investigation of the techniques, materials, formal and conceptual concerns involved in creating two-dimensional artwork. Special emphasis on experimentation and the development of a body of work.

ART 433 - Advanced 3-D Studies (1-6)

(1 to 6 hrs.) A thorough investigation of the techniques, tools, formal and conceptual concerns involved in creating three-dimensional artwork. Special emphasis on form and surface experimentation and development.

ART 434 - Advanced Digital Studies (1-6)

(1 to 6 hrs.) A thorough investigation of the techniques, software, formal and conceptual concerns involved in creating design and art with digital media. Special emphasis on experimentation and the development of a body of work.

ART 435 - Advanced BFA Studio/Design Studies (1)

(1-0-1) Preparation for the BFA Senior Exhibition, including creation of new art and/or design work.

Prerequisite: Student must be a senior in the BFA Art & Design program, complete an application form, and obtain consent of the instructor.

ART 445 - Ceramics III (3)

(2-2-3) An in-depth study of more advanced forms, surface treatment theory of kiln firing and glaze calculation.

Prerequisite: ART 345

ART 446 - Ceramics IV (3)

(2-2-3) Advanced study of contemporary ceramic form and surface resolution. Continued practical experience with kiln operation and glaze calculation.

ART 451 - Intaglio Printmaking Studio (3)

(2-2-3) Advanced studio in intaglio printmaking. Techniques include engraving, mezzotint, color intaglio, photo-etching and color monotype. May be repeated for credit.

Prerequisite: ART 351

ART 452 - Lithographic Printmaking Studio (3)

(2-2-3) Advanced studio in lithographic printmaking. Techniques include color lithography, reversal, chine colle and multi-plate registration. May be repeated for credit.

Prerequisite: ART 352

ART 461 - 18th and 19th Century European and U.S. Art (3)

(3-0-3) The history of European and American art painting, sculpture and architecture from c. 1750 until c. 1900.

ART 462 - 20th Century Art (3)

(3-0-3) The painting, sculpture and architecture of the 20th century.

ART 463 - Art of the United States (3)

(3-0-3) A survey of the social, political and cultural movements which affected the course of American artistic development.

ART 464 - Spanish, Portuguese and Latin American Art (3)

(3-0-3) A survey of the painting, sculpture and architecture of Spain, Portugal and Latin America.

ART 467 - Native American Art (3)

(3-0-3) A survey of the visual arts of the indigenous tribes of North America from the beginning of their recorded history through the present.

ART 468 - Appalachian Arts (3)

(3-0-3) This course will provide a survey of the arts of the Appalachian region from precolonial times to the present.

ART 473 - 35MM Photography (3)

(2-2-3) Advanced small format shooting and darkroom techniques exploring various subjects and styles.

Prerequisite: ART 373

ART 474 - Photo Studio (3)

(2-2-3) Small or large format individual projects requiring in-depth treatment of a particular subject, concept or style.

Prerequisite: ART 373

ART 475 - Large Format Photography (3)

(2-2-3) Large format camera operation with various subjects and styles and printing of large format negatives.

Prerequisite: ART 473 or permission of instructor

ART 481 - German Art of the 20th Century (3)

(3-0-3) This course will examine the visual expression of German, Austrian, and Swiss artists of the 20th century, including Die Brucke, Der Blaue Reiter, Dada, Neue Sachlichkeit, Surrealism, Bauhaus, art of National Socialism, and post war developments in the art of both West and East Germany. Particular emphasis will be placed on art and artists in relationship to political and social events of the time, especially the two world wars, the rise of National Socialism and the Cold War. Equates with IST 481.

ART 482 - Contemporary World Art (3)

(3-0-3) This course will provide a worldwide survey of contemporary visual arts in historical context and will explore current issues in contemporary art. Equates with IST 482.

ART 490 - Senior Exhibition (0)

(0-0-0) Only offered in spring semesters. Register spring semester of graduation or prior to graduation (if fall graduation is expected). Students will meet with their assigned faculty mentor 6-8 weeks prior to the exhibition drop-off date, submit a required number of professionally presented works and an artist statement for the Senior Exhibition prior to the submission deadline. Participation in Senior Exhibition is a requirement for graduation for all Art and Design students in all Art and Design programs, including Art Area (studio) BA and BFA and Art Area Teaching BA and BFA.

Prerequisite: Student must be a senior (>90 credit hours earned) in the BA or BFA Art and Design program.

ART 494 - Sculpture III (3)

(2-2-3) Advanced problems in sculpture involving a combination of materials and their uniqueness as media.

Prerequisite: ART 294 and ART 394

ART 495 - BFA Exhibition (0)

(0-0-0) Only offered in spring semesters. Register spring semester of graduation or spring semester prior to graduation (if fall graduation is expected). Students will submit a required number of professionally presented pieces (chosen in consultation with ART 435 instructor) for the exhibition prior to submission deadline, write and submit an artist statement, assist with installation of work in gallery and give a gallery presentation/artist talk about their work and ideas prior to the exhibition opening. Participation in BFA Exhibition is a requirement for graduation for all BFA Art and Design students in both the Art Area (studio) and Art Area Teaching BFA programs.

Prerequisite: ART 435 (taken previously or concurrently) and senior standing (>90 credit hours earned) in the Art Area (Studio) or Art Area Teaching BFA program.

ART 499C - Visual Art Capstone (3)

(2-2-3) An integrative course stressing oral and written discourse on the visual arts and preparation of students for professional goals.

ASTR - Astronomy

ASTR 105 - Your Cosmic Context (3)

(3-0-3) The purpose of this course is to introduce students to our current understanding of the Universe, how it works, and how we gain information about it. The course will give students an introduction to modern cosmology. Ninety-five percent of the mass/energy contained in the Universe is comprised of Dark Matter and Dark Energy and remains poorly understood. Great discoveries can still be made in modern cosmology, making it an exciting topic in modern astronomy and astrophysics. In this class students will learn how we find the clues and information that form the basis of our current understanding of the cosmos. An emphasis is placed on a description of "How do we know what we know'' about cosmology as a way to illustrate how scientists work and how modern science is conducted. Lastly, this class will also help strengthen critical thinking skills of students. This course satisfies the Level 2 Knowledge NSC requirement for general education.

ASTR 112 - Introductory Astronomy (3)

(3-0-3) The purpose of this introductory astrophysics course is for student to become familiar with our current understanding of the Universe, how it works, and how we gain information about it. The primary topics discussed in this course are celestial mechanics, planets and planet formation, properties of the Sun (our nearest star), the life cycle of stars from birth to death, relativity and black hole, galaxies (specifically structure and evolution, and activity) and cosmology. The course will also familiarize the students with modern astronomical instrumentations. An emphasis is placed on a description of "How do we know what we know'' about each of these objects as a way to illustrate how scientists work and how modern science is conducted. Lastly, this class will also help strengthen critical thinking skills of students. This course satisfies the Level 2 Knowledge NSC requirement for general education.

ASTR 125 - Astronomical and Physics Methods to Explore the Universe (3)

(3-0-3) An introduction to the study of astronomical phenomena: motions of the sky, planetary systems, stars, structure and scale in the universe. Emphasis on physical and astronomical methods: Newtonian physics, celestial mechanics, emission and detection of electromagnetic radiation, space-based observatories, spectroscopy, interferometry, multi-wavelength investigations and introduction to computational methods. This course includes night sky observation sessions. This course satisfies the Level 2 Knowledge NSC requirement for general education.

Prerequisite: One of the following: 1. Math ACT subscore of 24 or higher 2. "C" or better in both MATH 152 and MATH 141 3. "C" or better in MATH 174 or MATH 175

ASTR 130 - Stars, Galaxies and Cosmology (3)

(3-0-3) A continuation of the study started in ASTR 125 of astronomical phenomena, instrumentation and methods used in astronomy, the physical laws that govern the universe, and basic mathematical and computational methods that illustrate how these investigations may be carried out. This course focuses on stellar and galactic structure, evolution and interaction: the sun as a star, solar astrophysics, stars and stellar evolution, stellar endpoints, structure, evolution, and interaction of galaxies, and cosmology (structure and evolution of the universe). This course includes night sky observation sessions. An emphasis is placed on describing "how we know what we know" about each of these objects as a way to illustrate how scientists work and how modern science is conducted.

Prerequisite: MATH 175 and "C" or better in ASTR 125

ASTR 299 - Special Topics in Astronomy (3)

(3-0-3) Investigation of specific topics in astronomy. This course may be repeated in additional subject areas.

ASTR 303 - Solar System Astrophysics (3)

(3-0-3) This is a calculus-based introduction to the astrophysics of the Solar System. This course utilizes concepts of classical and modern physics to understand the structure and evolution of the Sun and other solar system objects. Topics include: historical overview of solar system dynamics,

structure of the solar system, the Sun as a star, the Sun-Earth-Moon connections, planetary atmospheres, exo-planetary systems.

Prerequisite: PHYS 232 and MATH 275

ASTR 311 - Astrophysics I: Stars and Stellar Evolution (3)

(3-0-3) A study of the properties, formation, structure and evolution of stars with an emphasis on the physical principles underlying the observed phenomena. Topics include the observed properties of stars, the birth, evolution and death of stars; and stellar remnants such as pulsars, black holes and white dwarfs.

Prerequisite: ASTR 130, MATH 175 and PHYS 232

ASTR 312 - Astrophysics II: Galaxies and Cosmology (3)

(3-0-3) This course is an in-depth study of the properties, formation, structure and evolution of galaxies and of principles and modern theories of cosmology. The course emphasizes the application of physical laws and principles in the studies of galaxies. Astronomy is an observational, as opposed to an experimental, science. We have knowledge of the galaxies only by observing the radiation these objects emit. We will begin our study with the properties of galaxies (beginning with the Milky Way) including determination of morphologies, distances, sizes, stellar components, (i.e. disks, nuclei, spiral arms, globular cluster haloes, x-ray and dark matter haloes), rotation rates, systemic velocities, atomic hydrogen distribution and mass. The remainder of the course will be an examination of principles of modern cosmology including an investigation of the Hot Big Bang Model, cosmological parameters, Dark Matter and Dark Energy, the geometry of space-time and scenarios for the ultimate fate of the universe.

Prerequisite: ASTR 311

ASTR 324 - Radio Astronomy (3)

(3-0-3) A study of astrophysically interesting phenomena utilizing the techniques of the science of radio astronomy; topics include galactic structure, radio galaxies, cosmic jets and black holes, interstellar molecules and instrumentation in radio astronomy, with a major emphasis in the methods of research in experimental astrophysics. Equates with PHYS 324 and SSE 324.

Prerequisite: ASTR 125 and PHYS 232

ASTR 325 - Observational Astronomy Techniques (3)

(2-2-3) This course provides an introduction to concepts and techniques of observations and data reduction in modern astronomy. This course will provide a description of observation techniques across the electromagnetic spectrum (from gamma-ray to radio) along with a brief description of the physics underlying emission detected at different wavelengths.

Prerequisite: PHYS 232 and MATH 275

ASTR 339 - Cooperative Education I (1-6)

(1 to 6 hrs.) Petition required. Participation in supervised work experience in an outside organization.ASTR 399 - Special Topics (1-6)

(1 to 6 hrs.)

ASTR 403 - Astrophysical Instrumentation and Payloads (3)

(3-0-3) The goal of this class is to make the student familiar with ground as well as space-based instrumentation in modern astrophysics. The course will cover the detection of the entire electromagnetic spectrum from the radio to gamma rays. In addition, the course will introduce the students to particle and gravitational wave detectors as modern tools in contemporary astrophysics. The focus of this course is on astrophysical hardware. Students will also learn different analysis techniques including data analysis and interpretation, data handling and mining. A component of this class is the analysis of an astronomical date set and the presentation of the methods and results in a short scientific paper and talk.

Prerequisite: "C" or better in ASTR 125 and PHYS 232

ASTR 431 - Space Plasma Physics (3)

(3-0-3) An introduction to plasma physics and its applications to space and astrophysical systems, with an emphasis on the Earth's environment in space. Topics will include the motion of charged particles in electromagnetic fields, the description of plasmas in the framework of one- and two-fluid approach, and its description in the framework of kinetic theory. Plasma equilibria, waves and instabilities will also be discussed. Equates with SSE 324 and PHYS 324.

Prerequisite: PHYS 232

ASTR 460 - High Energy Astrophysics (3)

(3-0-3) Introduction to physical processes associated with high energy astrophysics, including fundamentals of radiative transfer, basic theory of radiation fields, radiation from moving charges, bremsstrahlung, synchrotron radiation, Compton scattering, structure of both atoms and molecules as well as radiative transitions.

Prerequisite: PHYS 232 and MATH 276

ASTR 476 - Special Problems (1-6)

(1 to 6 hrs.) Petition required. Participation in supervised work experience within the Space Science Center.

ASTR 498 - Senior Research (1)

(1-0-1) Senior-level problems course and research project in astrophysics with emphasis on data collection or analysis, use of scientific instrumentation, and/or computational methods in astrophysics.

Prerequisite: Six hours from ASTR 311, ASTR 312, ASTR 324 or ASTR 460

BBA - Business Administration

BBA 100 - School of Business Orientation (0)

(2-0-0) Students pursuing an area in the School of Business Administration will gain an understanding of the various components of the university, the School of Business Administration and career planning. Topics covered include career exploration, student resources, learning resources, academic planning, student responsibilities, faculty/administration responsibilities and extra-curricular resources. This class is pass/fail.

BBA 200 - Business and Entrepreneurship (3)

(3-0-3) This course is designed to introduces students to the field of business broadly and entrepreneurship specifically in order to develop a skill set that encourages thinking and acting entrepreneurially. Additionally, students will learn to develop their own perspective through the lens of an entrepreneur by analyzing problems in our society and brainstorming innovative solutions to solving these problems. By doing this, students will earn to identify an opportunity that will create social and economic value in a dynamic business environment. Students will be actively involved in both entrepreneurial and intrapreneurial thinking.

BBA 261 - Business Law and Regulations (3)

(3-0-3) The forms of business organizations, including sole proprietorships, partnerships, and profit and nonprofit corporations. The regulatory environment and legal constraints on organizations; the relationship between business and government in policy formation; and basic legal concepts.

BBA 295 - Business Communication (3)

(3-0-3) This course introduces students to current foundations, processes and practices in business and technical communications that stress teamwork, human relations, ethics, demographic diversity, hands-on applications, social media, and global and cross-cultural communications. The focus is on both written and oral communications and their application in organizations.

BBA 301 - The Healthcare System (3)

(3-0-3) The U.S. healthcare industry is one of the fastest growing industries in the country. This course provides an orientation and overview to the important area of healthcare systems and the ongoing transformation, emerging trends and issues in this area. A summary of the American Health Care System and its driving forces: organizational forms; financing mechanisms; principal industry stakeholders; professional groups and workforce issues will be reviewed.

BBA 315 - Quantitative Analysis for Business (3)

(3-0-3) Using spreadsheet software, quantitative models needed for decision making in a a wide variety of business applications are examined. Specific topics included: descriptive statistics and charts (used to summarize cross-sectional and time series data), decision trees and analysis, hypothesis testing and ANOVA, simple and multiple regression models (variation, relationships, predictions), time series forecasting models (pattern identification, model appropriateness, model development), statistical quality control/Six Sigma, and business simulation.

Prerequisite: MATH 305

BBA 350 - Business Plan Development (3)

(3-0-3) This course introduces students to entrepreneurship and the role of the entrepreneur in a market economy. Students then have the opportunity to become an entrepreneur through a hands-on experience that takes them through the entrepreneurial development process; students collectively incorporate their knowledge of various disciplines in business to create a business plan for a business of choice. Students then present their respective business plans to a panel of judges serving as prospective funders for the business.

Prerequisite: MKT 204 and MNGT 201

BBA 363 - Ethical Decision Making in Business (3)

(3-0-3) This course is designed to assist students as future corporate decision makers to have an appreciation for the ethical implications of their actions, as well as the complex relationship between business and wider society. Ethics at both the micro and macro levels in organizations are explored. Various ethical theories and their practical applications for making decisions in the business environment are discussed, as well as a strategic framework that encompasses the ethical elements that need to be evaluated when implementing corporate policies that affect stakeholders. Through self-reflection, case analysis, group discussions, in-class debates and presentations, students will learn to apply theoretical and practical ideas to real life business situations.

Prerequisite: MNGT 201

BBA 370 - Operations and Service Management (3)

(3-0-3) This course examines the management of operations, focusing on both the strategic and tactical operational decisions required in such service sectors as healthcare, banking and financial services, transportation, and restaurants/hotels/resorts. Concepts related to and analytical models supporting the following operations management topics are examined in this course: facility location, designing and implementing service systems, service quality (measuring, assessing, improving), capacity planning and queuing, inventory control processes, just-in-time/lean systems and supply chain management.

Prerequisite: MNGT 201

BBA 380 - International Business (3)

(3-0-3) This course examines the theories, institutions and environmental elements that underlie conducting business in an international setting. Topics include: national business systems, patterns of world trade, regional and multilateral integration, international trade and investment, the global financial system, internationalization of the firm and the operating procedures of the multinational enterprise.

Prerequisite: 1. ECON 101 or ECON 201 and 2. ECON 202

BBA 475 - Leadership Development (3)

(3-0-3) This course is designed to develop the knowledge and skills needed to exercise effective leadership in groups and organizations. The course explores theories and research from various fields that inform the current practices of leadership in the modern workplace. Emphasis is placed on the practical application of these theories and the applied development of leadership and interpersonal skills through self-assessments, case analyses, field interviews, experiential exercises, personal reflection, creation of an individualized leadership-development plan, presentations and hands-on collaboration with a team on a leadership project during the semester.

Prerequisite: MNGT 201

Corequisite: BBA 363

BBA 499C - Strategic Management (3)

(3-0-3) Approaches for the integration of business functions and the development of strategies in managing domestic and global enterprises for competitive advantage.

Prerequisite: BBA 315, FIN 360, MKT 204, MNGT 201, CIS 311 and senior standing

BIOL - Biology

BIOL 105 - Biology for Your Life (3)

(3-0-3) An introduction to biological chemistry, cell structure and function, ecology, evolution, organismal diversity, reproduction and genetics. Not acceptable for biology majors or minors. This course satisfies the Level 2 Knowledge NSC requirement for general education.

BIOL 110 - Inquiry Biology for Teachers (3)

(2-2-3) An introduction to the study of living things, cell structure and function, photosynthesis, respiration, reproduction, growth, heredity, evolution and ecology. Not acceptable for biology majors, minors, or areas. This course satisfies the Level 2 Knowledge NSC requirement for general education.

Corequisite: BIOL 110L

BIOL 150 - Introduction Plant Science (3)

(2-2-3) Structure, growth, reproduction and ecology of plants. Emphasis on cultivated plants and applications. Not acceptable for biology majors, minors, and areas of concentration.

Corequisite: BIOL 150L

BIOL 155 - Environmental Biology (3)

(3-0-3) Human ecology with special emphasis on the interactions between humans, required resources (physical, chemical, geological and biological), and their regional and global environments. Information is presented from an analytical and interdisciplinary perspective. This course satisfies the Level 2 Knowledge NSC requirement for general education.

BIOL 160 - Introduction to Biological Principles (3)

(3-0-3) A course in biology for students to gain competency for BIOL 171. Emphasis is placed on establishing a foundation in molecular, cellular and biochemical aspects of biology. Not accepted as credit toward the department's majors, minors, or areas of concentration.

BIOL 171 - Principles of Biology (4)

(3-2-4) General biological principles; emphasis on cell function, energetics, homeostasis, genetics, evolution and ecology. This course satisfies the Level 2 Knowledge NSC requirement for general education.

Prerequisite: One of the following: 1. "C" or better in BIOL 105 or BIOL 160 2. ACT Math score of 22 or higher 3. "C" or better in MATH 152/152E

Corequisite: BIOL 171L

BIOL 199 - Selected Workshop Topics (1-4)

(1 to 4 hrs.) Workshops in various biological and environmental subjects presented periodically, based on need. Usually hands-on, experimental, and/or innovative, these workshops supplement various programs in the biological and environmental sciences or other disciplines. Individual credit toward degree programs must be approved by the department chair.

Prerequisite: 8 hours in BIOL

BIOL 210 - General Zoology (4)

(2-4-4) A survey of animals from protozoa to mammalia with emphasis on phylogeny, evolution, comparative morphology and physiology.

Prerequisite: BIOL 171

Corequisite: BIOL 210L

BIOL 213 - Introduction to Veterinary Microbiology (4)

(2-4-4) Study of bacterial and mycotic agents pathogenic to humans and animals. The collection, isolation, cultivation and identification of pathogenic microorganisms from animals is stressed. Virology, anti-microbial susceptibility tests, serological methods and quality control introduced. Not acceptable for biology majors or minors.

Prerequisite: CHEM 101

Corequisite: BIOL 213L

BIOL 215 - General Botany (4)

(2-4-4) Structure and physiology of vegetative and reproductive plant organs; introduction to plant genetics and plant kingdom in terms of structure, ecology and evolution.

Prerequisite: BIOL 171

Corequisite: BIOL 215L

BIOL 217 - Elementary Medical Microbiology (4)

(3-2-4) An elementary microbiology course for students interested in understanding the characteristics and activities of microorganisms and their relationship to health and disease. Not acceptable as credit for biology majors or minors.

Prerequisite: Take BIOL 235 or CHEM 101 and BIOL 160

Corequisite: BIOL 217L

BIOL 234 - Principles of Human Anatomy and Physiology I (3)

(3-0-3) This course is a study of human tissues and organs systems (integumentary, nervous, skeletal and muscular) with focus on the interrelationships of form and function. Homeostatic regulatory mechanisms will be continually emphasized. Not acceptable as credit for biology area nonteaching track or minor in biology. This course satisfies the Level 2 Knowledge NSC requirement for general education.

Prerequisite: 1. Composite ACT score of 19 or above or 2. BIOL 105, BIOL 160, or BIOL 171

BIOL 235 - Principles of Human Anatomy and Physiology II (3)

(3-0-3) This course is a study of human organ systems (endocrine, reproductive, cardiovascular, lymphatic, digestive, respiratory, and urinary) with focus on the interrelationships of form and function. Not acceptable as credit for biology area nonteaching or minor in biology. Required for the biology area teaching track.

Prerequisite: "C" or better in BIOL 234

BIOL 244 - Human Anatomy and Physiology I (4)

(3-2-4) This course is a study of human organ systems (integumentary, nervous, skeletal, and muscular) with a continual focus on homeostasis and the interrelationship of form and function. Molecular mechanisms will be emphasized.

Prerequisite: "C" or better BIOL 171

Corequisite: BIOL 244L

BIOL 244A - Human Anatomy and Physiology I Lab (1)

(0-2-1) This laboratory is a study of human cells, tissues and organ systems utilizing anatomical models, computer programs, histology, dissection and/or physiological experiments designed to supplement BIOL 244.

Prerequisite: BIOL 171 or permission of department chair

BIOL 245 - Human Anatomy and Physiology II (4)

(3-2-4) This course is a study of human organ systems (endocrine, reproductive, cardiovascular, lymphatic, digestive, respiratory, renal and the senses) with a continual focus on homeostasis and the interrelationship of form and function. Molecular mechanisms will be emphasized.

Prerequisite: "C" or better in BIOL 244

Corequisite: BIOL 245L

BIOL 245A - Human Anatomy and Physiology II Lab (1)

(0-2-1) This laboratory is a study of human cells, tissues and organ systems utilizing anatomical models, computer programs, histology, dissection and/or physiological experiments designed to supplement BIOL 245.

Prerequisite: One of the following: 1. BIOL 244 & BIOL 244A, or 2. BIOL 235

BIOL 301 - Fundamentals of Biochemistry (4)

(3-2-4) Chemistry of simple and complex biomolecules such as amino acids, proteins, carbohydrates, lipids and nucleic acids. Biosynthesis and metabolic cycles; gene composition (DNA, RNA, etc.). Not accepted as credit for chemistry minors.

Prerequisite: CHEM 112 or CHEM 201

Corequisite: BIOL 301L

BIOL 303 - Evolution and Creationism (1)

(1-0-1) Through the use of primary readings, the arguments against evolutionary theory by anti-evolution creationists are examined and refuted within the scientific paradigm, as well as philosophical and theological contexts. The goal of this course, primarily designed for non-biology majors, is to clarify misconceptions about evolutionary biology and the process of scientific investigation. Not acceptable for fulfilling requirements for the biology area or biology major.

BIOL 304 - Genetics (3)

(2-2-3) Mendelian inheritance, chemical nature of DNA and chromosomes, regulation of gene expression, experimental techniques in genetics, human genetic disorders and population genetics.

Prerequisite: BIOL 171

Corequisite: BIOL 304L

BIOL 313 - Economic Botany (3)

(3-0-3) Wood products, plant fibers, latex products, pectins, gums, resin tannins, dyes, essential oils, medicinals, insecticides, tobacco, oils, fats, waxes, food and beverage plants. Three lecture-discussion-demonstration hours per week.

BIOL 317 - Principles of Microbiology (4)

(2-4-4) Fundamental and applied aspects of microbiology. Prokaryotic cell structure and morphology, diversity, metabolism and genetics emphasized; virology and immunology introduced. Microbiological techniques, scientific inquiry, bacterial identifications and recombinant DNA technology stressed in the laboratory.

Prerequisite: BIOL 171 and CHEM 111 or CHEM 101

Corequisite: BIOL 317L

BIOL 318 - Local Flora (3)

(1-4-3) Identification and classification of plants native to the area. Collection and herbarium techniques.

Prerequisite: BIOL 215

Corequisite: BIOL 318L

BIOL 334 - Entomology (3)

(2-2-3) A general introduction to insect morphology, physiology, behavior, ecology, evolution and diversity. The roles of insects as pests, as vectors of disease and in forensics are also covered. Identification of common orders and families and general morphological structures are covered in lab. Field work is expected.

Prerequisite: BIOL 210

Corequisite: BIOL 334L

BIOL 336 - Pathophysiology (4)

(4-0-4) Emphasis on physiological mechanisms in regard to disease, pharmacological actions, and providing a bridge between basic science and the clinic. CHEM 101 or CHEM 111 is highly recommended for success in the course.

Prerequisite: BIOL 235 or BIOL 245

BIOL 337 - Comparative Anatomy (3)

(2-2-3) Vertebrate morphology, especially from an evolutionary perspective. Functional aspects and evolutionary trends among the vertebrate classes are emphasized.

Prerequisite: One of the following: 1. BIOL 210, or 2. BIOL 245 and BIOL 245A

Corequisite: BIOL 337L

BIOL 338 - Developmental Biology (4)

(3-2-4) This course focuses on vertebrate development from the embryo through fetal stage. Emphasis is placed on the cell and molecular biology of development as well as comparative structural development.

Prerequisite: BIOL 304

Corequisite: BIOL 338L

BIOL 350 - Heredity and Society (3)

(3-0-3) Evolutionary processes and intricacies of genetic transmission. Evolution in human thought, experience and affairs.

Prerequisite: 3 hours in BIOL

BIOL 351 - Plant Natural History (3)

(3-0-3) A survey of major taxonomic groups; emphasis on the natural history of local plants.

Prerequisite: BIOL 105 or BIOL 110

BIOL 352 - Animal Natural History (3)

(3-0-3) The main objectives of this course are to understand the basic structure, ecology and evolution, life history, behavior and diversity of animal groups.

Prerequisite: BIOL 105 or BIOL 110

BIOL 356 - Conservation Biology (3)

(3-0-3) Basic ecological principles, population and community ecology as they apply to current environmental problems. BIOL 357 is a companion course.

Prerequisite: BIOL 210 and BIOL 215

BIOL 357 - Environmental Testing Methods (3)

(1-4-3) Field and laboratory methods used by environmental professionals. Techniques of terrestrial and aquatic habitat analysis and aquatic toxicology. BIOL 356 is a companion course.

Prerequisite: BIOL 210 and BIOL 215

Corequisite: BIOL 357L

BIOL 369 - Humans, Resources and the Environment (3)

(3-0-3) In-depth survey of the interaction of human populations with their surrounding environment. Natural resource and waste management practices with a focus on sustainability will be studied using examples from local, regional, national and global levels. "Going Green" will be investigated from scientific, practical, social and economic perspectives. Not acceptable as credit for biology areas or minors.

Prerequisite: BIOL 105, NUTR 101, RAPP 289, PSY 121, or MATH 125

BIOL 380 - Cell Biology (3)

(2-2-3) Integration of biological, chemical and physical aspects of the cell. Emphasis on molecular processes.

Prerequisite: BIOL 304 and CHEM 112

Corequisite: BIOL 380L

BIOL 384 - Pathologic Basis of Disease (3)

(3-0-3) Emphasis placed on understanding descriptive evidence associated with immunology, organ system physiology and altered cellular biology. Student focus will be placed on disrupted physiological mechanisms and their role in disease development and patient suffering, providing a bridge between basic and clinic science.

Prerequisite: BIOL 245, BIOL 245A, and BIOL 380

BIOL 385 - Neurobiology (3)

(3-0-3) This course will study the nervous system from a cellular and molecular perspective. Topics covered will include electrical properties of neurons, intracellular signaling, plasticity, regeneration, and nervous system development.

Prerequisite: BIOL 304

BIOL 399 - Selected Workshop Topics (1-4)

(1 to 4 hrs.) Workshops in various biological and environmental subjects presented periodically, based on need. Usually hands-on, experimental, and/or innovative, these workshops supplement various programs in the biological and environmental sciences or other disciplines. Individual credit toward degree programs must be approved by the department chair.

Prerequisite: 8 hours in BIOL

BIOL 402 - Integrated Biology, Mathematics, Physical Sciences Teaching Methods (3)

(2-2-3) Methods course for students who desire to become teachers of middle school science and secondary school biology, physical science or mathematics. The course provides integrated and content specific clinical experiences designed to prepare the student for student teaching and their subsequent role as a classroom teacher.

Prerequisite: 20 hours in BIOL

Corequisite: BIOL 402L

BIOL 403 - Integrated Biology, Mathematics and Physical Sciences Field Experiences in Teaching (3)

(1-4-3) Course provides structured field experiences for students who desire to become teachers of secondary school biology, mathematics or physical science. This course provides guided field experiences to acclimate the student into the culture of teaching.

Prerequisite: 20 hours in BIOL

Corequisite: BIOL 403L

BIOL 404 - Advanced Genetics (3)

(3-0-3) A survey of current and historical topics in the field of genetics. Emphasis will be placed on reading primary literature, investigating non-

Mendelian observations, and understanding pivotal experimental techniques critical to the discovery of genetic mechanisms.

Prerequisite: BIOL 301 and BIOL 304

BIOL 407 - Invertebrate Zoology (3)

(1-4-3) Emphasis is placed on the evolutionary history, comparative morphology, key adaptations and diversity of the major invertebrate phyla. Field trips optional.

Prerequisite: BIOL 210

Corequisite: BIOL 407L

BIOL 409 - Limnology (3)

(2-2-3) Ecology and biota of inland waters. Some all-day field trips required.

Prerequisite: 12 hours in BIOL and 8 hours in CHEM

Corequisite: BIOL 409L

BIOL 421 - Biology of Ferns (3)

(1-4-3) Structure, reproductive biology, systematics, genetics, ecology, evolution and natural history of ferns and fern-like plants. Field trips required.

Prerequisite: BIOL 215

Corequisite: BIOL 421L

BIOL 422 - Forests and Tree Ring Science (3)

(1-4-3) Emphasis on tree ring science, forest biology, woody plant identification, and field methods in forest ecology; the course will emphasize principles of study design, data analysis, quality control, data standardization, statistical analysis, and familiarity with a wide variety of dendrochronological software. Field trips required.

Prerequisite: BIOL 215

Corequisite: BIOL 422L

BIOL 424 - Immunology (3)

(2-2-3) Basic cellular and molecular mechanisms of the immune response and its regulation, including response manifestations. Modern laboratory techniques stressed, including monoclonal antibody production.

Prerequisite: BIOL 317 and BIOL 380

Corequisite: BIOL 424L

BIOL 425 - Animal Physiology (3)

(2-2-3) Comparison of fundamental physiological processes in representative vertebrate animals. Emphasis placed on comparative energetics and physiological adaptations of organisms to their environment.

Prerequisite: 1. BIOL 301 or CHEM 301 and 2. BIOL 245 and BIOL 245A or BIOL 380

Corequisite: BIOL 425L

BIOL 426 - Plant Physiology (3)

(2-2-3) The fundamentals of physiological functioning of angiosperms from the molecular to the organismal level. Topics include: diffusion, osmosis, cell wall and membrane structure, mineral nutrition, photosynthesis, respiration, photoperiodism, and other aspects of plant growth and development.

Prerequisite: BIOL 215, BIOL 304 and BIOL 380

Corequisite: BIOL 426L

BIOL 427 - Pathogenic Microbiology (3)

(2-2-3) Medically important microorganisms; bacteria and fungi emphasized. The isolation, cultivation, and identification of pathogenic microorganisms from clinical specimens are stressed. Antimicrobial susceptibility tests, serological methods and quality control introduced.

Prerequisite: BIOL 217 or BIOL 317

Corequisite: BIOL 427L

BIOL 428 - Virology (3)

(3-0-3) Morphology and chemistry of the virus particle; symptoms; identification and control of more common virus diseases of plants and animals; host-virus relationships; and research methods concerned with viruses.

Prerequisite: BIOL 317

BIOL 429 - Histology (3)

(2-2-3) The study of human tissues with emphasis on anatomical, physiological and biochemical properties/relations.

Prerequisite: BIOL 380 and 8 more hours in BIOL

Corequisite: BIOL 429L

BIOL 431 - Herpetology (3)

(1-4-3) The anatomy, physiology, taxonomy, ecology, distribution, behavior, natural history and evolution of amphibians and reptiles. Emphasis on collection, identification and classification of those herptiles found in eastern North America. Field trips required.

Prerequisite: BIOL 210

Corequisite: BIOL 431L

BIOL 433 - Ichthyology (4)

(2-4-4) The anatomy, physiology, systematics, ecology, zoogeography, natural history, evolution, and conservation of fish. Emphasis on collection, identification, and classification of freshwater fish native to eastern North America and marine fish of the Atlantic and Gulf Coasts.

Prerequisite: BIOL 210

Corequisite: BIOL 433L

BIOL 437 - Ornithology (3)

(1-4-3) Anatomy, physiology, classification and identification of birds, as well as examination of bird behavior, life histories, ecology and evolution. Field trips required.

Prerequisite: BIOL 210

Corequisite: BIOL 437L

BIOL 438 - Mammalogy (3)

(2-2-3) The taxonomy, distribution, behavior, ecology, evolution, and natural history of mammals, with emphasis on those inhabiting eastern North America. Field trips required.

Prerequisite: BIOL 210

Corequisite: BIOL 438L

BIOL 439 - Cooperative Education (1-4)

(1 to 4 hrs.) Work experience with an in-depth exposure representative of the student's academic level. Not accepted as an elective course for the areas and minor in biology.

BIOL 443 - General Parasitology (3)

(2-2-3) Protozoan, helminth and arthropod parasites of man and domestic animals; emphasis on etiology, epidemiology, diagnosis, control and general life histories of parasites.

Prerequisite: BIOL 210

Corequisite: BIOL 443L

BIOL 444 - Clinical Laboratory Procedures (3)

(2-3-3) The clinical laboratory plays a significant role in the ever changing arena of modern medicine. It is the purpose of this course to provide current technical and clinical information about laboratory procedures to permit the student to adequately understand, select and interpret each specific procedure.

Prerequisite: 1. BIOL 245 and BIOL 245A and 2. BIOL 301 or CHEM 301

Corequisite: BIOL 444L

BIOL 446 - Biotechnology (3)

(2-2-3) Advanced theory and methods in genetic engineering, protein expression and purification, and practical applications of immunoglobins; transgenic organisms and agricultural biotechnology are also covered.

Prerequisite: BIOL 301 and BIOL 304

Corequisite: BIOL 446L

BIOL 447 - Organ Systems Physiology (3)

(3-0-3) Specific focus on three integrating themes: the interrelationships of human organ systems, homeostasis and the complementing relationship of structure and function. Homeostatic regulatory mechanisms between interactive organ systems will be continually emphasized, as well as how the body meets its changing demands during the onset of various pathological conditions.

Prerequisite: 1. BIOL 245 and BIOL 245A and 2. BIOL 301 or CHEM 301

BIOL 449 - Plant Anatomy (3)

(2-2-3) Gross and microscopic studies of internal and external structures of vascular plants. The cell, meristem, cambium, primary body, xylem and phloem; roots, stems and leaves; flowers and fruits; ecological anatomy.

Prerequisite: BIOL 215

Corequisite: BIOL 449L

BIOL 451 - Advanced Cell Biology (3)

(3-0-3) Contemporary experimental procedures and knowledge of cell structure and function; including cell anatomy, genetics, growth and differentiation, molecular and physiological processes, and communication mechanisms. Emphasis will be placed on the discussion and presentation of current peer-reviewed literature.

Prerequisite: BIOL 380

BIOL 452 - Aquatic Entomology (3)

(1-4-3) Survey of aquatic insects, their ecology, their biology, and how they are used as environmental biomonitors. Emphasis is placed on using taxonomic keys for insect identification and field sampling techniques. Extensive field work is expected, some all-day field trips required.

Prerequisite: BIOL 210

Corequisite: BIOL 452L

BIOL 454 - Environmental Education (3)

(2-2-3) Distribution and reserve depletion of wildlife, forest, land, water, air and mineral resources; emphasis on population, pollution and environment. Field trips to environmentally important areas are required. Not acceptable as credit for area in biology or minors. Especially designed for in-service and pre-service teachers.

Prerequisite: 8 hours in BIOL

Corequisite: BIOL 454L

BIOL 456 - Plant Morphology (3)

(2-2-3) Fossil and living nonvascular plants (except bacteria) and vascular plants; emphasis on ecology, morphology and evolution.

Prerequisite: BIOL 215

Corequisite: BIOL 456L

BIOL 461 - Ecology (3)

(2-2-3) Interrelations of organisms and environment. Some all day field trips required.

Prerequisite: 12 hours in BIOL and 8 hours in CHEM

Corequisite: BIOL 461L

BIOL 473 - Medical-Veterinary Entomology (4)

(3-2-4) Emphasis is placed on the identification, life history, behavior and ecology, and prevention and control of insects and arachnids of medical and veterinary importance, as well as the viral, bacterial, protist, and filarial pathogens they may transmit to humans and domesticated animals.

Prerequisite: BIOL 171 or BIOL 210 or AGR 233 or VET 218

Corequisite: BIOL 473L

BIOL 476 - Special Problems (1-6)

(1 to 6 hrs.) Independent topics and research in the biological and environmental sciences. Topic must be approved prior to registration by the department chair.

BIOL 478 - Animal Behavior (3)

(3-0-3) An introduction to the principles of animal behavior with emphasis in oncological and evolutionary implications.

BIOL 480 - History of Science (3)

(3-0-3) Development of scientific traditions, discoveries and concepts from the time of ancient Egypt to the present.

Prerequisite: 6 hours total in BIOL, CHEM and PHYS

BIOL 483 - Selected Workshop Topics (1-4)

(1 to 4 hrs.) Workshops in various biological and environmental subjects presented periodically, based on need. Usually hands-on, experimental, and/or innovative, these workshops supplement various programs in the biological and environmental sciences or other disciplines. Individual credit toward degree programs must be approved by the department chair.

Prerequisite: 12 hours in BIOL

BIOL 490 - Advanced Biochemistry (3)

(3-0-3) This course will acquaint the student with the major macromolecular constituents of the cell, the various chemical, biochemical, and molecular techniques that are used to isolate and study these macromolecules and the flow of information implicit in their sequence and structure, and the research analytical techniques exemplified in the primary scientific literature. There will be a further investigation of the biochemical, physiological, and systems level perspective of organismal function and pathology. Many of these investigations will further involve pharmacological agents and other remedies used in treatments of human diseases.

Prerequisite: "C" or better in BIOL 301 or CHEM 301

BIOL 493 - Laboratory Techniques in Biochemistry (2)

(0-4-2) Weekly laboratory sessions focusing on advanced techniques utilized in the study of biological molecules. Emphasis will be placed on methods in isolation and characterization of biological materials, density gradient ultracentrifugation, spectroscopic methods, electrophoretic techniques, chromatographic separation, radioisotopic labeling and statistical analysis of experimental data.

Prerequisite: BIOL 301

BIOL 499C - Contemporary Environmental Issues (3)

(3-0-3) An in-depth examination of current environmental issues and problems with local, regional, national or international import. The historic context, current laws and applicable technology, ecological, social and ethical implications of the issues will be explored.

Corequisite: BIOL 461

BIOL 499D - Principles of Evolution (3)

(3-0-3) Major principles of evolutionary biology are illustrated by using examples from molecular, cellular, and organismal biology, history of evolutionary theory, population genetics, natural selection, speciation, and macroevolutionary patterns.

Prerequisite: BIOL 304 and BIOL 317

BIOL 499E - Current Issues in Biomedical Sciences (3)

(3-0-3) This course will discuss situations that students may encounter in their professional career and provide the knowledge required to assemble a rational framework for ethical decision making.

Prerequisite: BIOL 171 and CHEM 111

BIS - Business Information Systems

BIS 425 - Training and Development for Industry (3)

(3-0-3) Study of the relevant theories, issues, trends and methods in training and developing adult learners in work organizations; includes program design, needs and task analysis, delivery methods, working with consultants and program evaluation. Equates with MNGT 425.

Prerequisite: BBA 295 and MNGT 201

BIS 499C - Methods of Teaching Business and Information Technology Education (3)

(3-0-3) Application and integration of field experiences, teaching and learning approaches to create objectives, lesson plans, skill building techniques; use of methods, materials, technology, teaching aides, testing, measurement and grading for business and marketing education grades 5-12 certification. Field experience required.

BMS - Biomedical Science

BMS 120 - Introduction to Oral Health (1)

(1-0-1) An introduction to oral health concepts and patient services providing a basic understanding of oral health and disease. Common oral diseases and oral pathologies will be discussed, as well as current effective prevention of oral disease and treatments to restore oral health. The epidemiology of oral disease will be considered including current statistics about oral disease burden in the United States. Oral health disparities, access to care issues and high-risk populations will be described and strategies will be outlined as solutions. Finally, oral health and systemic health linkages will be described and implications of these associations discussed.

BMS 121 - Introduction to Oral Health Careers (1)

(1-0-1) Introduction to the profession of dentistry provides an overview of pre-clinical dental courses taught in the first two years of dental school. The student will be familiarized with basic dental terminology, past, current and future issues in dentistry and the latest techniques and technology used in clinical settings. Exposure to the practice of dentistry and its dental specialties in didactic, pre-clinical and clinical settings will be included. This course serves as a foundation for students interested in pursuing a career in dentistry or for those who want to enhance their knowledge of oral health prior to entering any health field. A visit to the University of Kentucky College of Dentistry is required during the course.

Prerequisite: BMS 120

BMS 122 - Introduction to the Dental Workforce (1)

(1-0-1) An introduction to the dental workforce. It will cover the legal, ethical and organizational issues that surround dental workforce policies which in-turn impact oral health and access to care in the United States and in the Appalachian region.

BMS 220 - Dental Public Health I (3)

(3-0-3) This course is an introduction to dental public health in Appalachia. It will cover systems theory and the integration of oral health into larger care delivery in the Appalachian region. The student will learn about the legal, ethical, and organizational policies which govern oral health services administration in Appalachia. This course is educational and informative and does not satisfy program electives or requirements in the BMS program.

BMS 221 - Dental Public Health II (3)

(3-0-3) The course is a study of the behavioral, social and cultural factors related to the Appalachia population's oral health disparities. The student will learn that research in this area contributes to the development and evaluation of dental public health policies, programs and services in Appalachia that will promote and sustain health.

BMS 222 - Dental Public Health III (3)

(3-0-3) This course is a study of the structure and management of dental public health programs in the Appalachian region. Appalachian dental public health systems within the public and private sector will be examined. The student will learn decision making procedures (using information systems), financial management and reimbursement policies related to dental public health programs in Appalachia.

BMS 223 - Dental Public Health IV (3)

(3-0-3) This course is an introduction to the dental public health leadership for advocates in oral health for Appalachia. Leadership theories and practice within public health systems will be examined for usability within the Appalachian region. Through the application of systems theory, the student will learn about the diverse interdisciplinary relationships and collaborative efforts of dental public health teams and how to lead those teams for Appalachia.

CHEM - Chemistry

CHEM 101 - Survey of Chemistry (4)

(3-2-4) A survey of chemical topics that includes describing and applying atomic structure concepts to the particulate nature of matter; identifying and relating periodic table trends to atomic structure; using basic nomenclature rules for inorganic compounds; using conservation of matter and energy with stoichiometry for chemical reactions; articulating relationships between molecular structure, bonding and intra- and intermolecular forces. This course is intended for students in the applied sciences and is not recommended for natural science majors. This course satisfies the Level 2 Knowledge NSC requirement for general education.

Prerequisite: One of the following: 1. An "A" or "B" in MATH 093 2. A "C" or better in MATH 131 or higher 3. MATH ACT of 19 or higher

Corequisite: CHEM 101L

CHEM 104 - The Chemistry of Ordinary Things (3)

(3-0-3) An introduction to some of the fundamental qualitative ideas of chemistry and the application of these ideas to energy sources, pollution, foods, nutritional supplements, cosmetics, plastics and other modern materials.

CHEM 111 - Principles of Chemistry I (4)

(3-2-4) An introduction to stoichiometry and chemical equations, electronic structure of atoms and molecules, periodic properties, gases, phases equilibria and solutions, with laboratory. Primarily for natural science and pre-professional students. This course satisfies the Level 2 Knowledge NSC requirement for general education.

Prerequisite: "C" or better in MATH 152 or ACT Math score of 22 or higher

Corequisite: CHEM 111L

CHEM 112 - Principles of Chemistry II (4)

(3-2-4) Continuation of CHEM 111. An introduction to chemical equilibria, thermodynamics and kinetics, electro-chemistry and coordination compounds, with laboratory. The descriptive chemistry of selected groups of elements is introduced.

Prerequisite: "C" or better in CHEM 111

Corequisite: CHEM 112L

CHEM 131 - Environmental Chemistry I (4)

(3-2-4) An overview of types of chemical reactions including organic reactions. This will be applied to studying the origin, nature, distribution and fate of a wide variety of chemical species in the environment. The laboratory portion of the course will illustrate the fundamentals of potentiometry, spectrophotometry, atomic absorption, atomic emission and gas, liquid and ion chromatography methods used for environmental analyses.

Prerequisite: "C" or better in CHEM 111

Corequisite: CHEM 131L

CHEM 199 - Selected Topics (1-6)

(1 to 6 hrs.) This course is repeatable.

CHEM 201 - Survey of Organic Chemistry (4)

(3-2-4) A survey of chemical topics that includes organic synthesis and redox reactions, organic functional groups, energy/fuels, pharmaceuticals, herbicides, insecticides, polymers, carbohydrates, proteins and lipids. The topics are covered in combination with case studies such as the pollution of the environment and the use of different energy sources. This course is intended for students in the applied sciences and is not recommended for natural science majors.

Prerequisite: "C" or better in CHEM 101

Corequisite: CHEM 201L

CHEM 239 - Cooperative Education (1-8)

(1 to 8 hrs.) Participation in supervised work experience in a professional environment.

CHEM 299 - Selected Topics (1-6)

(1 to 6 hrs.)

CHEM 301 - Fundamentals of Biochemistry (4)

(3-2-4) Chemistry of simple and complex biomolecules such as amino acids, proteins, carbohydrates, lipids and nucleic acids. Biosynthesis and metabolic cycles; gene composition (DNA, RNA, etc.). Not accepted as credit for chemistry minors.

Prerequisite: CHEM 112 or CHEM 201

Corequisite: CHEM 301L

CHEM 326 - Organic Chemistry I (4)

(3-2-4) Structure, nomenclature and physical properties of organic molecules; organic reactions reagents and mechanisms including alkanes, alkyl halides, alcohols, ethers, polymers and radicals; IR, NMR and Mass spectroscopy, with laboratory.

Prerequisite: "C" or better in CHEM 112

Corequisite: CHEM 326L

CHEM 327 - Organic Chemistry II (4)

(3-2-4) Reactions and reaction mechanisms of dienes, aromatics, aldehydes, ketones, carboxylic acids and derivatives, phenols, amines and organometallics, with laboratory.

Prerequisite: "C" or better in CHEM 326

Corequisite: CHEM 327L

CHEM 328 - Organic Chemistry III (4)

(2-4-4) Advanced topics in organic chemistry; orbital symmetry, heterocyclics and polycyclics, macromolecules, carbanion reactions, and an introduction to physical organic chemistry, with laboratory.

Prerequisite: "C" or better in CHEM 327

Corequisite: CHEM 328L

CHEM 332 - Environmental Chemistry II (3)

(3-0-3) An intensive study of the fate of environmental contaminants and their dispersion. Containment and remediation strategies will be discussed in detail, particularly their chemical principles.

Prerequisite: CHEM 112

CHEM 339 - Cooperative Education (1-8)

(1 to 8 hrs.) Participation in supervised work experience in a professional environment.

CHEM 340 - Chemical Information (2)

(1-2-2) Study and use of primary and secondary chemical literature sources, data, and reference sources in chemistry. An introduction to the Chemical Abstracts service, Biological Abstracts, Science Citation Index and the corresponding data bases. Personal data bases, data collection and manipulation, and related current software will also be discussed.

Prerequisite: CHEM 326

Corequisite: CHEM 340L

CHEM 351 - Bioinorganic Chemistry (3)

(3-0-3) Structure of inorganic compounds. Electron transfer reactions, acid-base theories, kinetic and reaction mechanisms, and relationship of thermodynamics to structure and reactivity of inorganic compounds. Concepts will be taught using biological systems or model compounds for these systems as examples.

Prerequisite: "C" or better in CHEM 326

CHEM 360 - Analytical Chemistry (3)

(2-3-3) Errors and small sample statistics, stoichiometry, equilibrium calculations, electrochemical potentials and complexometric chemistry. Labs will include volumetric, pH, and various chromatographic and absorption spectrophotometric techniques. Stoichio and equilibria concepts will be pursued through lecture and applicators in the instrumental labs.

Prerequisite: "C" or better in CHEM 326

Corequisite: CHEM 360L

CHEM 399 - Selected Topics (1-6)

(1 to 6 hrs.)

CHEM 429 - Pharmaceutical Chemistry (3)

(3-0-3) Advanced topics in organic, physical, and computational chemistry of drug discovery, design and kinetics. Drug-receptor interactions, enzyme inhibition/inactivation, drug deactivation/elimination. Prodrugs and drug delivery systems will also be discussed.

Prerequisite: "C" or better in CHEM 327 and CHEM 301 or BIOL 301

CHEM 439 - Cooperative Education (1-8)

(1 to 8 hrs.) Participation in supervised work experience in a professional environment.

CHEM 441 - Physical Chemistry I (3)

(3-0-3) Chemical thermodynamics and chemical kinetics.

Prerequisite: "C" or better in CHEM 326, MATH 175, and PHYS 201 or PHYS 231

CHEM 442 - Physical Chemistry II (5)

(3-4-5) Topics include quantum chemistry, spectroscopy, statistical mechanics, and transport properties.

Prerequisite: "C" or better in CHEM 441 and MATH 275

Corequisite: CHEM 442L

CHEM 451 - Advanced Inorganic Chemistry (3)

(3-0-3) Electronic structure and bonding in inorganic compounds. Thermodynamic and kinetic interpretation of selected inorganic and organometallic reactions.

Prerequisite: "C" or better in CHEM 351

CHEM 460 - Instrumental Analysis (5)

(2-6-5) The theory and practice of infrared, visible, ultraviolet, X-ray and gamma ray, and electron spectroscopies in determinations. The use of chromatography, atomic spectroscopy, and electrochemistry in analytical chemistry. Some quantitative applications of mass and nuclear magnetic resonance spectroscopy are included.

Prerequisite: "C" or better in CHEM 327 and CHEM 360

Corequisite: CHEM 460L

CHEM 476 - Special Problems (1-6)

(1 to 6 hrs.) Topic to be approved prior to registration. (Maximum of three credit hours applicable toward major, minor or area of concentration in chemistry.)

CHEM 499 - Selected Topics (1-6)

(1 to 6 hrs.)

CHEM 499C - Chemistry Senior Project I (2)

(0-2-2) Students are introduced to the basics of chemical research, including planning and implementing goals, reading the chemical literature, analyzing data, drawing conclusions, and introductory written and oral presentations of research.

Prerequisite: "C" or better in CHEM 360 and CHEM 441 or CHEM 327

CHEM 499D - Chemistry Senior Project II (1)

(0-1-1) Continued work on research and the written and oral presentation of research. The project will culminate in an oral presentation of the project to the chemistry faculty and a written presentation in the format of a scientific journal article.

Prerequisite: "C" or better in CHEM 499C

CHEM 499E - Issues in Chemistry (3)

(3-0-3) This course will discuss situations that students may encounter in their professional career and provide the knowledge required to assemble a rational framework for ethical decision making.

Prerequisite: "C" or better in CHEM 360 and CHEM 441 or CHEM 327

CHI - Chinese

CHI 101 - Elementary Chinese I (3)

(3-0-3) An introduction to listening, speaking, reading and writing Mandarin Chinese, with some attention to culture.

CHI 102 - Elementary Chinese II (3)

(3-0-3) An introduction to listening, speaking, reading, and writing Mandarin Chinese, with some attention to culture.

Prerequisite: CHI 101

CHI 199 - Chinese Language & Culture (3)

(3-0-3) An introduction to Chinese phonetics, basic vocabulary and elementary grammar. Basic reading and conversation skills are emphasized.

CHI 201 - Intermediate Chinese I (3)

(3-0-3) Continuing study of listening, speaking, reading and writing Mandarin Chinese, with some attention to culture.

Prerequisite: CHI 101 and CHI 102

CHI 202 - Intermediate Chinese II (3)

(3-0-3) Continuing study of listening, speaking, reading and writing Mandarin Chinese, with some attention to culture.

Prerequisite: CHI 101, 102 AND 201

CHI 300 - Contemporary Chinese Literature and Chinese Society (3)

(3-0-3) An introduction to how contemporary Chinese writers have created works reflecting the new era of Chinese life. An emphasis on how recent Chinese literature both reflects Chinese history and how it confronts the problems of present-day Chinese society.

CIS - Computer Information Systems

CIS 101 - Computer Literacy (3)

(3-0-3) Students will learn effective strategies for applying microcomputer software, including word processing, spreadsheet, presentation and database management. The course introduces concepts, terminology, and tools of the microcomputer software operating and applications system environment. Introduction to the effective utilization of networking for communication, research, and information downloading is also incorporated in the course. Emphasis is on preparing the student to use computer technology effectively in education and work environments.

CIS 200 - Problem Solving in IS (3)

(2-2-3) This course will present problems, modeling and problem solving in areas across the information systems discipline, including: decision making, programming, databases, visual design, information architecture and file management. Students will be introduced to elementary skills in programming, file management, website development and database design.

Corequisite: CIS 200L

CIS 202 - Introduction to Programming - Visual Basic (3)

(3-0-3) This course uses the Visual Basic programming language to introduce basic programming concepts and processes such as data types, variables, operators, control structures and arrays. A steady progression of hands-on programming exercises is used to teach analytical and quantitative problem solving, methodical programming and design.

Prerequisite: CIS 200 or MATH 170

CIS 205 - Introduction to Programming - C++ (3)

(3-0-3) This course uses the C++ programming languages to introduce basic programming concepts and processes such as data types, variables, operators, control structures and arrays. A steady progression of hands-on programming is used to teach analytical and quantitative problem-solving, methodical programming and design.

Prerequisite: CIS 200 or MATH 170

CIS 211 - Software Tools for Business (3)

(3-0-3) This course prepares students to be proficient in problem solving through the application of spreadsheet and database tools. In addition, students are introduced to other decision support tools, such as electronic presentation tools and web editors that are used in today's global workforce.

CIS 214 - Introduction to Programming - Java (3)

(3-0-3) This course uses the Java programming language to introduce basic programming concepts and processes such as data types, variables, operators, control structures and arrays. A steady progression of hands-on programming exercises teaches analytical and quantitative problem solving, methodical programming and design. Introductory level object-oriented programming, Java input/output process, exception handling and graphical user interfaces are covered.

Prerequisite: CIS 200 or MATH 170

CIS 295 - Mobile Application Development (3)

(3-0-3) This course focuses on design and development of mobile application development for the end-user environment. Case studies and problem activities in core business areas are used to address specific solutions for enhancing end-user productivity.

CIS 302 - Advanced Programming -Visual Basic (3)

(3-0-3) This course builds upon the skills and knowledge developed in CIS 202. Emphasis is placed upon development in a visual environment. Major topics include object oriented concepts, database linkages, graphics and developing applications for the Internet. Students will use state-of-the-art development tools and design methods to implement business applications that run on a stand-alone PC, on a network and on the Internet.

Prerequisite: CIS 202 or CS 303

CIS 303 - Data Structures (3)

(3-0-3) Key concepts of data definitions, such as lists, stacks, and queues. Recursion, graphs and trees, sorting and searching. Structured program design, elementary data structures and the study of algorithms as tools of program design. Equates with CS 303 and MATH 303.

Prerequisite: CIS 205

CIS 305 - Advanced Programming-C++ (3)

(3-0-3) A continuation of CIS 205, with an emphasis on object-oriented methodologies, modular program design, reusable and extensible components, cross-platform compatibility, and stream manipulations. Numerous hands-on programming assignments are used to help the student build proficiency as a computer programmer.

Prerequisite: CIS 205 or CS 303 or consent of instructor.

CIS 311 - Management Information Systems (3)

(3-0-3) This course provides an introduction to the fundamental concepts of information systems. Its focus is on preparing future business professionals and knowledgeable workers for the successful implementation and effective use of information in globally-networked organizations. The content emphasizes the strategic role of information systems in developing business solutions, integrating business processes and transforming enterprises for e-commerce and mobile commerce.

CIS 314 - Advanced Programming-Java (3)

(3-0-3) This course provides a hands-on introduction to the concepts and terminology of object-oriented programming in the Java language. Concepts covered include applets and servlets, packages and server-side processes, and dynamic Internet content generation.

Prerequisite: CIS 214 or CS 303

CIS 320 - Web Technologies and Design (3)

(3-0-3) This course introduces the student to the Internet technologies, web design concepts and information architecture using web editor software. The course also provides an introduction to the hypertext markup language (HTML). Emphasis will be placed on the planning, design, implementation and evaluation of informational websites for organizations.

CIS 322 - Systems Security and Information Assurance (3)

(3-0-3) An overview of information systems security, with applications. The course emphasizes methods for the management of information security through the development of policies, procedures audits and logs. It also addresses threats, risks and vulnerabilities, emerging technologies in areas like smart cards, digital signatures and biometrics, and methods for the analysis of legal, ethical and privacy issues in information systems.

CIS 326 - Introduction to Databases (3)

(3-0-3) This course provides the students with an introduction to the core concepts in data and information management. Emphasis is on database concepts and fundamentals, ER (entity-relationship) approach to data modeling, the relational model to relational database design, and the use of query languages, such as SQL for relational database implementation and query processing.

Prerequisite: CIS 211, CS 170, or MATH 170

CIS 339 - Cooperative Education III (1-8)

(1 to 8 hrs.) This course provides on-site instruction and practical work experience in the computer field in a paid position approved through an application process. A maximum of three credit hours is allowed as a CIS option elective.

Prerequisite: CIS 311 and consent of school cooperative education coordinator

CIS 340 - Data Networking Systems (3)

(3-0-3) Fundamental concepts of digital networks and telecommunications technologies in a global environment. The course covers analysis, applications, and administration of computer networks and a broad range of current hardware and software.

CIS 365 - Healthcare Informatics (3)

(3-0-3) This course covers fundamental concepts of healthcare information systems; current and developing health and business information systems of interest to managers in health services organizations; healthcare information system architecture; security and privacy issues; uses of healthcare information clinical and strategic analysis and decision support; techniques required to develop and evaluate an information system request for proposal; and thoughts on the future of healthcare information systems including community health systems and web-based access to health information. The course will also cover current information and issues regarding the latest technology applications.

CIS 385 - Introduction to Business Analytics (3)

(3-0-3) This course introduces business analytics, an important information systems field that deals with analyzing data to help business organizations make better decisions. Big Data (unstructured large amount of data) is discussed with selected examples. Technical tools (electronic spreadsheet programs such as Excel, data analysis programming languages such as R, Big Data management frameworks such as Hadoop, etc.) and conceptual business tools (analysis models, statistical learning, etc.) are introduced to help students develop fundamental knowledge and skills for further mastery of advanced business analytics.

Prerequisite: MATH 305 or MATH 353 or consent of instructor

CIS 398 - Practicum in Information Systems (3)

(3-0-3) Provides work experience (non-compensated) in an occupational area. Student works under supervision in an approved position. Course credit commensurate with time worked, type of work, variety of work experience.

CIS 405 - Web Development Strategies and E-commerce (3)

(3-0-3) A practical introduction to concepts and development methods fundamental to the creation and deployment of global Internet-based computer information systems. Topics include website development and support, Internet infrastructure technologies, database connectivity, electronic commerce technologies and business models, and web server implementation strategies and practices. Students will work in groups to develop an electronic commerce website.

Prerequisite: 1. CIS 311 or CS 380 and 2. CIS 202, CIS 205, or CIS 214

CIS 413 - IS Analysis and Design (3)

(3-0-3) This course introduces the System Development Life Cycle (SDLC), information systems (IS) project management, systems analysis, structured systems design, information systems strategic planning, and best practices for the design, planning, implementation and support of information

systems. Students will learn how to do systems analysis and design for and how to plan an IS project and implement the project using project management principles. This class makes use of case studies to promote critical thinking and further understanding of topics covered in the class.

Prerequisite: CS 380 or CIS 211 and CIS 311

CIS 426 - Database Administration (3)

(3-0-3) This course deals with the administration and management of databases. Emphasis will be on advanced database design, advanced database querying, database change management, data availability, database performance management, data integrity and security, database backup and recovery, disaster planning, data and storage management, and distributed databases.

Prerequisite: CIS 326

CIS 430 - Advanced Topics in Information Systems (3)

(3-0-3) This course is intended to introduce students to the idea of Decision Support Systems (DSS), Expert Systems (ES), Executive Information Systems (EIS), Artificial Intelligence (AI), Modeling and other leading edge concepts in Information Systems.

Prerequisite: CIS 202, CIS 205, CIS 211, CIS 214 or CIS 215

CIS 439 - Cooperative Education IV (1-8)

(1 to 8 hrs.) This course provides on-site instruction and practical work experience in information systems in a paid position approved through an application process. A maximum of three credit hours is allowed as a CIS option elective.

Prerequisite: CIS 311 and consent of school cooperative education coordinator

CIS 442 - Network Administration (3)

(3-0-3) This course provides a foundation in the concepts of computer communications and networking. Students gain hands-on experience in managing, operating, and troubleshooting various local area networks and communications hardware and software.

Prerequisite: CIS 340

CIS 476 - Special Topics in Computer Information Systems (1-3)

(1 to 3 hrs.) This course is for independent study of CIS topics of special interest. Student must prepare a written project proposal and justification for the independent study prior to registration. Proposals are approved based on their academic merit and the special needs of the student.

Prerequisite: CIS 200 or CS 170

CIS 480 - Cases in Information Systems (3)

(3-0-3) This is a senior-level course that integrates through case studies and other comprehensive experiences the application of concepts, theories, and skills associated with business information systems. Emphasis will be on the use of IT as an enabler of process improvement and process innovation. The course also involves the analysis, synthesis, application and evaluation of advanced concepts related to information systems technology, end-user information systems, global and ethical issues related to IT, technological training, and strategy planning for human aspects of technological change.

Prerequisite: CIS 311 and senior standing

CIS 490 - Strategic IS Management (3)

(3-0-3) Students will learn skills in information technology project management and will complete a capstone project in a real-world working environment. Working in teams, students analyze the project in a paced approach, identify and document metrics and milestones, and deliver an information systems solution under deadline that meets the agreed-upon project objectives. Final deliverables include a term portfolio and a formal class presentation.

Prerequisite: ETM 320 and senior standing in CIS

COMS - Strategic Communication

COMS 100 - Introduction to Strategic Communication (3)

(3-0-3) An overview of the field and its various subdisciplines, including public relations, leadership, group facilitation, training and conflict treatment. Focus on history of the field and communication theories that support practical activity in professions and society. Balanced emphasis on face-to-face and device-mediated messaging.

COMS 108 - Fundamentals of Speech Communication (3)

(3-0-3) Practice and study of speech communication fundamentals, including: interpersonal skills; critical listening; small group problem solving; information gathering; preparation and delivery of a variety of informal presentations. This course satisfies the Level 1 required core-oral communications for general education.

COMS 110 - Strategic Messaging (3)

(3-0-3) Students will demonstrate the ability to communicate effectively in oral, written and mediated channels to achieve desired goals. Students will develop skills in the use of sound and moving/still images for the production and communication of messages.

COMS 200 - Strategic Communication Research (3)

(3-0-3) An introduction to research methods professionals use to design and evaluate strategic communication. The course emphasizes focus group, survey, and interview methods used for audience analysis. Additional attention is given to the effective use of bibliographic databases, along with the selection and application of communication technology for gathering primary data.

COMS 250 - Introduction to Intercultural Communication (3)

(3-0-3) A focus on intercultural misunderstanding and its remedies. Topics include the nature of culture, cultural value patterns, ethnic and gender identities, culture shock, the relationship between language and culture, differences in verbal styles, intercultural differences in nonverbal communication, the origins and nature of human bias and prejudice, the management of intercultural conflict, the challenges of intercultural-intimate relationships, questions of global identity, E.net identity, and communication ethics. This course satisfies the Level 3 Global Cultures HUM requirement for general education.

Prerequisite: COMS 108

COMS 277 - Professional Practices (1)

(1-0-1) Students learn basic job search skills for internship and entry-level positions as a communication professional. Focus is on writing a resume, practicing job interviews, learning to network, and identifying "soft skills" valued by employers.

COMS 290 - Conflict and Communication (3)

(3-0-3) Students will study fundamentals of conflict management and demonstrate specific strategies for addressing conflicts typical to everyday life at home, at work, in their communities and across cultures. This course satisfies the Level 3 Global Cultures HUM requirement for general education.

COMS 300 - Strategic Organizational Leadership (3)

(3-0-3) Study of organizational communication concepts and theory, with an emphasis on how leaders use communication strategically to build and sustain organizations that incorporate new technologies, transform workplace values, and increase multiculturalism. Students develop communication skills for establishing positive interpersonal relationships at work and promoting effective teamwork, using face-to-face and mediated channels of communication.

Prerequisite: ENG 100 and COMS 108

COMS 310 - Professional Presentations and Speech Writing (3)

(3-0-3) As future professionals, employers will expect students to be confident speakers who can organize and prepare clear, concise and interesting presentations. This course prepares students by developing their speaking and delivery skills. In addition, students will use critical thinking and analytical skills to solve problems, build arguments and use creativity to develop presentations. This course is designed to help students become confident presenters, as well as savvy speech writers.

Prerequisite: ENG 100 and COMS 108

COMS 330 - Argumentation and Persuasion (3)

(3-0-3) A focus on the strategic design of persuasive messages in interpersonal, group and public settings including various media. Topics include professional ethics, critical analysis of audience and situational factors, theories of persuasion, the development of rational arguments, selection of appropriate communication channels, and effective delivery of persuasive messages.

Prerequisite: ENG 100 and COMS 108

COMS 333 - Social Media and Community (3)

(3-0-3) This course introduces learners to essential social media technology while framing the adoption and use of social media as communication within communities. Learners describe, analyze and evaluate socially-mediated communication, exploring its potential to create and maintain the conditions for community and to facilitate change. Professional opportunities in social media and community will be explored.

Prerequisite: ENG 100 and COMS 108

COMS 339 - Cooperative Education (1-8)

(1 to 8 hrs.) The Department of Communication, Media and Languages offers a series of cooperative study courses allowing students to alternate semesters of on-campus studies with periods of full-time related work experience. See general section of the catalog for a more complete description of cooperative education. See restrictions applying to all programs in communication.

COMS 340 - Event Planning and Public Relations (3)

(3-0-3) This course will examine the basic principles and procedures of effective planning, management and execution of small and large scale conferences, meetings, and events. Throughout the semester, students will examine the principles associated with event planning and public relations. The semester will culminate in students carrying out the event they have planned.

Prerequisite: ENG 100 and COMS 108

COMS 347 - Internship (1-6)

(1 to 6 hrs.) May be repeated. Competency-based practical experiences aimed at increasing the proficiency of the student in assigned positions. See restrictions applying to all programs in communication.

COMS 350 - Communication, Culture and Diversity (3)

(3-0-3) An examination of speech communication theory and skills useful under conditions of cultural diversity with a focus on the improvement of communication across cultural and group verbal and nonverbal language systems. Equates with IST 350.

Prerequisite: ENG 100 & COMS 108

COMS 370 - Communication and Health (3)

(3-0-3) This course is a study of health communication concepts and theories with an emphasis on the relationship between communication and health-related problems. The course will examine multiple contexts of health communication including relationships, organizations and the mass media. The primary focus of the course is on improving health outcomes through improved communication.

Prerequisite: ENG 100 and COMS 108

COMS 382 - Public Relations Principles (3)

(3-0-3) Examination of the basic principles, practices, responsibilities and ethics in the profession of public relations.

Prerequisite: ENG 100 and COMS 108

COMS 383 - Facilitating Team Communication (3)

(3-0-3) Development of communication skills required for participating effectively in small groups and teams. Students will study and practice team building, group facilitation, problem solving, and performance assessment of task groups.

Prerequisite: ENG 100 and COMS 108

COMS 399 - Special Topics (3)

(3-0-3) Study of specialized topics variable by semester and instructor and intended to enhance regular course offerings. Certain topics may require laboratory work. The course may be repeated for credit if the subtitle indicates different content is being offered.

COMS 400 - Interviewing (3)

(3-0-3) A detailed study of the various interview types, coupled with role playing experiences. Includes media, employment and healthcare interviews.

Prerequisite: ENG 100 and COMS 108

COMS 405 - Communication Issue Management (3)

(3-0-3) This course examines how a variety of organizations mediate public policy issues from a communication perspective. Course study involves an in-depth theoretical examination of corporate advocacy and issue management in America from a communication perspective. Throughout the semester, students will consider current issue management theory, the pragmatics of issue management, and issue management strategies through application of the theory to past and on-going issue management campaigns in U.S. politics.

Prerequisite: ENG 100 and COMS 108

COMS 420 - Analysis of Persuasion (3)

(3-0-3) This course examines the foundations of persuasion through theory and practice in multiple contexts: interpersonal relationships, politics, advertising and speaking in diverse contexts. Students will observe, analyze and write about persuasive events as they happen in their everyday lives. This class will help students be better consumers of persuasion as they participate in the communities where they live and work, thus making them better engaged citizens.

Prerequisite: ENG 100 and COMS 108

COMS 439 - Cooperative Education (1-8)

(1 to 8 hrs.) The Department of Communication, Media and Languages offers a series of cooperative study courses allowing students to alternate semesters of on-campus studies with periods of full-time related work experience. See general section of the catalog for a more complete description of cooperative education. See restrictions applying to all programs in communication.

COMS 447 - Internship (1-6)

(1 to 6 hrs.) May be repeated. Competency-based practical experiences aimed at increasing the proficiency of the student in assigned positions. See restrictions applying to all programs in communication.

COMS 476 - Special Problems (1-3)

(1 to 3 hrs.) Research on an original project with appropriate written report within a subject area.

Prerequisite: ENG 100 and COMS 108

COMS 482 - Public Relations Campaigns (3)

(3-0-3) An examination of case studies involving specific practices in carrying out campaigns in public relations.

Prerequisite: ENG 100, COMS 108, and COMS 382

COMS 499C - Senior Seminar in Communication (3)

(3-0-3) This course will entail individualized and group instruction, assessment and career preparation focused on disciplinary and general education competencies and life skills with an emphasis on the integration of knowledge and skills acquired in the program.

Prerequisite: ENG 100 and COMS 108

CRIM - Criminology

CRIM 210 - The Sociology of Deviance (3)

(3-0-3) This course is designed to introduce students to the sociological and criminological study of deviant and criminal behavior. Students are also introduced to theories of crime and deviance. Equates with SOC 210.

Prerequisite: SOC 101

CRIM 250 - Introduction to the Criminal Justice System (3)

(3-0-3) This course introduces students to the current structure and functioning of the criminal justice system in the U.S. from arrest, district attorney's discretionary authority in charging, indictments, conviction, sentencing and the appeals process. Students are provided with a brief history of the American criminal justice system including policing, the courts and the correctional system.

CRIM 300 - Criminogenic Family (3)

(3-0-3) The course focuses on family risk factors for later delinquency and criminal behavior as well as preventative intervention and treatment. This course examines a variety of family issues including child maltreatment, domestic violence, family alcoholism, drug addiction, family chaos, inadequate or neglectful parenting, corporal punishment, which are known risk factors for later criminal behavior. Students gain a general understanding of the macro-level processes that have detrimental effects on family functioning and family structure. Equates with GST 302 and SWK 300.

CRIM 302 - Inside Out Prison Exchange Seminar (1)

(1-0-1) This one-hour course must be taken with the CRIM 303 course as the process course for the outside students. This course will provide an opportunity for campus students to discuss their interactions with the inside students the previous day as well as interact appropriately with colleagues or other outside students. Equates with SWK 302.

Prerequisite: 9 hours CRIM

CRIM 303 - Special Topics: Inside Out Prison Exchange Program (3)

(3-0-3) The "Inside-Out" Prison Exchange Program is an opportunity for a small group of undergraduate students (outside students) from Morehead State University's campus and a group of inside students (inmates from Little Sandy Correctional Complex) in Sandy Hook, Kentucky, to exchange ideas and critically examine political, economic, and/or social issues in American society. This may include prisoner re-integration, social problems, global problems, poverty, inequality, social policy, the family, crime and justice and other sociological or social work related topics. See the Inside-Out National Prisoner Exchange Program at http://www.insideoutcenter.org. Equates with SWK 303.

Prerequisite: 9 hours CRIM

CRIM 306 - Juvenile Delinquency (3)

(3-0-3) This course examines the extent, ecological distribution, and theories of delinquency in contemporary American society, including a critical examination of trends and methods of treatment of delinquency. Criminology majors must take this course or CRIM 401. Equates with SOC 306 and SWK 306.

Prerequisite: SOC 101

CRIM 315 - Sociology of White Collar Crime (3)

(3-0-3) This course provides students with a variety of theoretical explanations and examples of corporate and organizational crime, as well as crime committed by individuals in the workplace. Equates with SOC 315.

CRIM 316 - Global Crime and Terrorism (3)

(3-0-3) Students are introduced to international crime and terrorism in the 19th, 20th and 21st centuries through the study of government-organized Armenian genocide, the Holocaust and the Nuremberg Tribunal and the initiation of human rights laws following the end of World War II. Students are also introduced to the study and structure of international terrorism that has emanated from the Neo-Salafi and Wahhabi ideology of Radical Muslims beginning in the 20th century after the state of Israel was formed. Other types of organized crime discussed will include the following: corruption, drug trafficking, weapons trafficking and human trafficking. The new International Criminal Court is introduced to students, as well as international civil cases involving human rights violations. Equates with SOC 316.

CRIM 317 - Police Culture (3)

(3-0-3) This course provides detailed information about the paramilitary structure of the law enforcement agencies. Students learn about the history of policing, the code of silence, police brutality, corruption and the history of police commissions. Students gain an understanding of the bureaucratic, organizational and political pressures that exist within and outside these organizations. Students develop a better understanding of the Bill of Rights and how that affects police work, as well as Supreme Court cases and decisions that have impacted law enforcement practices. Equates with SOC 317.

CRIM 318 - Criminal Evidence and Investigation (3)

(3-0-3) Examination of the criminal investigation process with emphasis on theory of investigation, role of criminal evidence, and effectiveness of the process.

Prerequisite: CRIM 250 and CRIM/SOC 317

CRIM 319 - Responding to Military and Veteran Populations (3)

(3-0-3) The purpose of this course is to understand military culture, the stressors associated with military lifestyle and the cycles of deployment that service members and their families navigate. Different military contexts (e.g. active duty, guard/reserve, veteran) are explored. Ethical issues for working in this environment are considered. Theory-based and research-informed strategies to intervene with combat related trauma, co-morbid disorders, traumatic brain injuries, and psychosocial issues with families are reviewed. Military related policies are also examined as well as veteran systems of care. Students completing this course will have a more in-depth understanding of and ability to work with the military, veterans, and their families in a variety of settings. Equates with SOC 319 and SWK 319.

CRIM 325 - Global Inequality (3)

(3-0-3) An introduction to globalization and global inequality. Students examine the manifestation of and systematic causes of global inequality in the areas of education, wealth, information, technology, health, human rights, and other areas. Solutions for alleviating global inequality are explored. Equates with SOC 325.

Prerequisite: SOC 101

CRIM 333 - Women and Partner Violence (3)

(3-0-3) This course offers social science and experiential exposure to theories, policies, professionals and skills associated with women's experiences with intimate partner violence. The unique challenges of women in rural settings, women of color, and women in same-sex relationships are also explored. Equates with SOC 333, SWK 334 and GST 333.

CRIM 337 - Sociology of Food (3)

(3-0-3) A sociological analysis of the politics, economy and culture of food. Topics include food consumption patterns, body image, health, and eating disorders; food and individual, community and cultural identity; class, ethnic, and gender-based food patterns; modern food production patterns, inequality and the environment; social food movements and social justice. Equates with GST 337, SOC 337, and SWK 337.

CRIM 343 - Religion and Sexuality (3)

(3-0-3) This course explores the intersection between sexuality and religion in contemporary societies. Broad topics this course covers include an analysis of fundamentalist thought, metaphysics and sociology of religion through the lens of sexual behavior and sexual orientation. Equates with SOC 343, SWK 343 and GST 343.

Prerequisite: 3 hours from SOC, CRIM, SWK, GST or consent of instructor

CRIM 345 - Correctional Institutions (3)

(3-0-3) This course familiarizes students with a wide range of correctional settings through daily travel to correctional facilities throughout Kentucky and neighboring states. The institutions include local, state and federal correctional facilities for juveniles and adult offenders. Students are required to integrate corrections literature with their experiential observations.

CRIM 355 - Sociology of the Body (3)

(3-0-3) An introduction to the sociological study of the body. Students explore the multifaceted interplay between culture, groups, identity, the Self, and the body. The social and cultural construction of bodies related to inequality based on race, class, gender, sexuality, disability and other dimensions are examined. Equates with GST 355, SWK 355, and SOC 355.

CRIM 363 - Sex Industry Perspectives (3)

(3-0-3) This course explores current theoretical debates and empirical studies on the sex industry. Topically, this course covers the feminist sex wars, stripping, prostitution, pornography and sexual trafficking. Equates with GST/SOC 363.

CRIM 372 - Victimology (3)

(3-0-3) This course provides an examination of criminal victimization in the United States via an overview of current theory, research, and trends within the context of specific victimization types. This course will cover three general inter-related areas: research and theory on victimization, the consequences of victimization, and the practical responses to victimization. Equates with SOC 372.

Prerequisite: CRIM 250

CRIM 380 - Race, Class, Gender and Crime (3)

(3-0-3) This course focuses on the intersection of race, class and gender membership with regard to treatment within the criminal justice system by police, judges, juries and actual sentencing decisions including the death penalty. The course also provides insights about the unique types of crime most likely to be perpetrated by specific demographic groups. Students are also exposed to criminological theories that explain criminal justice system disparity, discrimination and differences in actual offending patterns. Equates with SOC 380, SWK 381 and GST 380.

CRIM 385 - Contemporary Legal Issues in the Criminal Justice System (3)

(3-0-3) This course will explore the nature, functions, limitations and objectives of law, criminal courts, the grand jury and petit jury, family law and civil liability for police and correctional officers. This course will also cover the impact of the United States Constitution and its amendments on the criminal justice system. Included are the 4th, 5th, 6th, 8th and 14th Amendments as they affect the accused, the convicted and the employees working in the criminal justice system.

Prerequisite: CRIM 250

CRIM 388 - Sociology of Punishment (3)

(3-0-3) This course provides the student with background knowledge of the development of ideas and actions taken against those people who have been the objects of society's punishment. Equates with SOC 388.

Prerequisite: CRIM 210

CRIM 395 - Sociology of Serial Murder (3)

(3-0-3) This course is designed to provide students with an in-depth examination of the serial killers among us. It focuses on the myths and stereotypes that have evolved from mass media and public efforts to find explanations for the relatively rare phenomenon of serial murder. Case studies are used to introduce several serial killers that have plagued the streets of America and abroad.

CRIM 399 - Special Class (3)

(3-0-3) Unique topics and learning experiences that supplement regular course offerings. May be repeated in additional subject areas.

CRIM 401 - Criminology (3)

(3-0-3) This course provides a thorough examination of criminological theories. Students are also provided with explanations of the causes of crime, as well as the methods of effective treatment and prevention of crime. Criminology majors must take this course or CRIM 306. Equates with SOC 401.

Prerequisite: CRIM 210

CRIM 404 - Crime and Justice Policies (3)

(3-0-3) Students will learn how criminal justice policies are determined by crime incidents, lobbyists, and social movements. Students also will learn how policy writers and politicians develop policies and the intended and unintended effects of such policies. Equates with SOC 404.

Prerequisite: CRIM 250 and CRIM 380

CRIM 416 - Working with Offenders (3)

(3-0-3) In this course, students learn the basic structure of the counseling process with offenders, including techniques and practice skills. Equates with SWK 416.

CRIM 456 - Organizations in Contemporary Society (3)

(3-0-3) A sociological study of the roles of formal organizations in society, including consideration of their structures and processes. This course will examine contemporary issues in the sociology of organizations and work, including bureaucratic and alternative structures and the role of leadership and decision making. Equates with SOC 456.

CRIM 461 - Sociology of the Law (3)

(3-0-3) This course provides a clear understanding of the manner in which laws are formed to protect certain groups and marginalize others who are often perceived as threatening. Students deconstruct specific laws by analyzing the formation of criminal law from its incipient stages of development in American society. Equates with SOC 461.

CRIM 465 - Environmental Sociology (3)

(3-0-3) This course introduces students to this subfield of sociology examining current environmental issues and conflicts and various theoretical perspectives used to understand them and formulate solutions. The role of grassroots organizations is also reviewed. Equates with SOC 465.

CRIM 469 - Animals and Society (3)

(3-0-3) An examination of the interactions and emergent relationships between humans and animals from a sociological perspective. Equates with SOC 469 and SWK 469.

CRIM 476 - Special Problems (1-3)

(1 to 3 hrs.) Arranged with the department to study some particular aspect of the field of criminology.

CRIM 490 - Practicum in Criminology (3)

(1-2-3) The course will require practicum students to meet as a group to discuss their practicum assignments. The course consists of practical experience in a jail, juvenile or adult correctional institutions, law enforcement agency, juvenile or adult probation and parole agency, or other related agency. A minimum of 120 hours will be spent at the assigned agency.

Prerequisite: 9 hours in CRIM

CRIM 499C - Senior Criminology Capstone (3)

(3-0-3) This course is designed to integrate and synthesize the students' knowledge of criminology prior to graduation. This includes a review of substantive theories, research methods, and information about criminal behavior and the criminal justice system.

Prerequisite: 1. CRIM 450 and SOC 451 2. CRIM 306 or CRIM 401

CRW - Creative Writing

CRW 499C - Senior Thesis (3)

(3-0-3) Senior BFA majors write a thesis arranged with a member of the creative writing faculty and submit it to a BFA faculty committee for appraisal.

CS - Computer Science

CS 170 - Introduction to Computer Science (4)

(3-2-4) An overview of modern computer science; mathematical treatment of algorithms; implementation of fundamental programming principles in a modern programming language; techniques of problem solving related to computing. Designed for students who have basic familiarity with Microsoft Office applications. Equates with MATH 170.

Prerequisite: MATH 152 or ACT Math score of 22

Corequisite: CS 170L

CS 172 - Computer Games Concepts (3)

(3-0-3) An introductory course to the general principles of computer games and to primary 3-D computer animation. Topics include interface structure, strategies and tactics for making computer games, and animation specific topics including modeling, materials, lighting and output.

Prerequisite: CS 170, CIS 101, ETM 110 or SCI 110

CS 212 - Game Implementation Technique (3)

(3-0-3) This course introduces Win32 user-interface programming. GDI+, and the fundamentals of 2-D bitmap operations, which are the foundation of all computer graphics. It also covers mathematical modeling which is used for game programming.

Prerequisite: CS 172

CS 239 - Cooperative Education I (1-3)

(1 to 3 hrs.) An opportunity for students to participate in co-op or intern positions. This course may not be counted toward elective credits for the area of concentration, major, or minor in computer science.

CS 270 - Introduction to Scientific Computing (3)

(3-0-3) An introductory computing course emphasizing fundamental computing tools and techniques and their application to solving scientific problems. Topics include operating systems, hardware, popular and scientific software, C++ programming in the context of solving scientific problems, and electronic communication.

Prerequisite: "C" or better in MATH 152 or ACT Math score of 22

CS 285 - Programming in C# (3)

(3-0-3) This course covers the fundamentals of object-oriented programming in C# and using the .NET framework. Topics include C# language, advanced object-oriented programming concepts, windows programming, and event driven programming.

Prerequisite: CS 170, ETM 110, or CIS 200

CS 303 - Data Structures (3)

(3-0-3) Key concepts of data definitions, such as lists, stacks, and queues. Recursion, graphs and trees, sorting and searching. Structured program design, elementary data structures and the study of algorithms as a tool of program design.Equates with CIS 303 and MATH 303.

Prerequisite: CIS 205

CS 310 - Algorithms and Advanced Data Structures (3)

(3-0-3) An in-depth study of advanced nonlinear data structures, such as trees and graphs, as well as their implementations and applications. A continuation of advanced programming techniques, including inheritance and polymorphism. A thorough study of algorithms and algorithm efficiency.

Prerequisite: CS 303

CS 312 - Game Prototype Design and Implementation (3)

(3-0-3) Introduction to the industry standard software for game prototype design and implementation. Use of techniques and critical thinking skills for modeling and animation. Customization options and strategies for 3-D production.

Prerequisite: CS 303

CS 335 - Theory of Programming Language (3)

(3-0-3) This course is an introduction to the fundamental principles underlying the design of programming languages. This course investigates the programming features of several common languages from the point of view of implementation. The student is exposed to the language characteristics along with the details and difficulties in their implementation.

Prerequisite: CS 310

CS 339 - Cooperative Education II (1-6)

(1 to 6 hrs.) An opportunity for students to participate in co-op or intern positions. This course may not be counted toward elective credits for the area of concentration, major or minor in computer science.

CS 340 - Computer Architecture and Organization (3)

(3-0-3) This course covers topics related to computer design and computer structure and function. Topics include: computer arithmetic, digital logic, assembly language, instruction sets, addressing modes and formats, processor structure and function, memory organization, input/output organization, and control unit operation.

Prerequisite: CS 303

CS 360 - Operating Systems (3)

(3-0-3) Topics to be covered include operating system philosophy, tasking and processes, process coordination and synchronization, scheduling and dispatch, physical and virtual memory organizations, device management, file systems and naming, security and protection, communications and networking, and distributed systems.

Prerequisite: CS 310

CS 372 - Math for Gaming and Computer Science Applications (3)

(3-0-3) This course will cover mathematical topics including geometry, trigonometry, vector operations, matrix operations, transformation and motion in two and three dimensions in the context of how they are used for video game development and computer science applications. Students will use mathematical concepts to design and implement computer games and computer science applications.

Prerequisite: MATH 175 and CS 285

CS 380 - Software Engineering (3)

(3-0-3) This course is an introduction to the discipline of software engineering. Students will explore the major phases of the software life cycle, including analysis, specification, design, implementation, testing and maintenance of software systems. Techniques for creating documentation and using software development tools will be presented. Students will gain experience in these areas by working in teams on software development projects.

Prerequisite: CS 310

CS 385 - Advanced Programming Methods (3)

(3-0-3) This course covers advanced high performance object-oriented programming with a focus on large scale programming projects and complex programming paradigms. Topics include generic programming, programming with dynamic objects, advanced use of exceptions, delegates, design patterns, advanced GUI programming, managing memory and non-memory resources effectively, emerging database technologies and database applications, web-based applications, and cross-platform applications development.

Prerequisite: CS 285

CS 412 - Software Engineering for Computer Games (3)

(3-0-3) Software Engineering for Computer Games uses an object-oriented (OO) approach. The course will incorporate Unified Modeling Language (UML) for OO analysis and design, including software patterns and how to incorporate them into the design process. Topics of Software Engineering are presented in the context of having student teams design and implement computer games. Greater emphasis is placed on the student projects as compared to other gaming courses. Course includes the topics of listeners, collisions, simulating physics, OpenGL graphics, etc.

Prerequisite: CS 212 and CS 372

CS 420 - Data Mining Concepts (3)

(3-0-3) This course introduces the basic concepts of data mining and knowledge discovery. Topics include: data types, data patterns, data preprocessing, data cleaning, outlier analysis, features reduction, feature discretization, data integration, data mining process, learning machines, statistical learning theory, learning methods, model estimation, Bayesian inference, Logistic regression, classification and prediction.

Prerequisite: CS 303

CS 430 - Machine Learning (3)

(3-0-3) This course provides an overview of machine learning algorithms and their applications. Topics include dimensionality reduction, feature selection, supervised learning, unsupervised learning, clustering algorithms, classification algorithms, linear regression, logistic regression, deep learning, anomaly detection and applications of machine learning.

Prerequisite: CS 303

CS 439 - Cooperative Education III (1-12)

(1 to 12 hrs.) An opportunity for students to participate in co-op or intern positions. This course may not be counted toward elective credits for the area of concentration, major or minor in computer science.

CS 440 - Parallel and Distributed Systems (3)

(3-0-3) This course provides an introduction to parallel and distributed systems. Topics include fundamentals of distributed computing systems, types of network, network principles, network protocols, communication across distributed systems, basic architectures of parallel and distributed systems, multithreaded computing, principles of parallel algorithm design, and performance of parallel and distributed systems.

Prerequisite: CS 310

CS 450 - Computer Graphics (3)

(3-0-3) An in-depth study of the techniques, methods and mathematics behind computer graphics. This course will examine the spectrum of today's graphics systems, discuss fundamental graphics techniques and the associated mathematics, transformations, rendering, geometric modeling and animation.

Prerequisite: CS 310 and MATH 275

CS 460 - Scientific and Parallel Computing (3)

(3-0-3) An introduction to scientific and parallel computing. This course explores computers with vector and parallel architectures, development of algorithms for parallel architectures, and programming on parallel and vector computers.

Prerequisite: CS 310 and MATH 312

CS 470 - Artificial Intelligence (3)

(3-0-3) Students in this course will learn how to use artificial intelligence concepts and techniques to solve computer science and engineering problems. Topics include: introduction to AI programming, predicate calculus logic, state space search, heuristic search, knowledge representation, control mechanisms, programming languages for AI, automated reasoning, machine learning and expert systems.

Prerequisite: CS 310

CS 472 - Multiplayer Networking Game Programming (3)

(3-0-3) This course will cover the topics of computer networks and databases. It will include multiplayer game programming, specifically with TCP/UDP and Sockets. Relational databases will be used to store data and stats from a game.

Prerequisite: CS 372

CS 476 - Special Problems (1-3)

(1 to 3 hrs.) Designed for the purpose of permitting a student to do advanced work as a continuation of an earlier experience or to work in an area of special interest.

CS 480 - Computer Security (3)

(3-0-3) Students in this course will learn the fundamentals of computer security. Topics include: principles of computer security, authentication, access control, malicious software, program security, trusted operating systems, security requirements for database systems and ethical issues in computer security.

Prerequisite: CS 360

CS 482 - Digital Forensics (3)

(3-0-3) This course covers the principles of digital forensics. Topics include digital forensics analysis, digital evidence, file systems analysis, file carving, information hiding and steganography, password recovery, email forensics,

database forensics, network forensics, mobile device forensics, and digital forensics tools.

Prerequisite: CS 360

CS 485 - Network Security (3)

(3-0-3) Students in this course will learn the fundamentals of wired and wireless network security. Topics include: network defense techniques, network firewalls, packet filtering, authentication protocols, virtual private networks, transport-layer security, secure routing, wireless network security, Web security, IP security, intrusion detection and intrusion prevention.

Prerequisite: CS 310

CS 499C - Capstone and Senior Thesis I (2)

(2-0-2) Designed to give the student an introduction to research and literature in mathematics, computer science or physics. This course is equated with MATH 499C and PHYS 499C. Prior to registration for this course, students must file a Thesis Proposal Form in the CSIS department office.

CS 499D - Capstone and Senior Thesis II (1)

(1-0-1) A formal report that includes the basic literature search and appropriate original work prepared in a form suitable for submission to a scientific journal. A technical oral presentation of the research will be made to the department. In addition, an oral or poster presentation at a local, state, regional or national meeting will be required.

Prerequisite: CS 499C

CTE - Career and Technical Education

CTE 185 - New Teacher Institute Career and Technical Education (3)

(3-0-3) Emphasis on how to prepare and implement course organization, lesson planning, teaching techniques and evaluation as it relates to industrial-technical subject matter.

CTE 207 - Foundations of Career and Technical Education (3)

(3-0-3) Orientation for students enrolled in a career and technical teaching program in agricultural education or industrial education. Course will provide an overview of career and technical education. Field experience required.

CTE 364 - Guidance in Career and Technical Education (3)

(3-0-3) Study of the concept of career education and to explore the new emerging role of the guidance counselor in regard to problems that exist in our present educational system, innovative concept of career education, the counselor and classroom teacher's responsibility within the framework of career education evaluation of career education, and exploring future implications for developing positive attitudes and values for work for all students, including the disadvantaged and handicapped.

CTE 372 - Technical Media Development (3)

(2-2-3) The use of technology in preparing technical presentations, including issues and delivery methods. A portfolio will be maintained and presented at the end of class.

CTE 381 - Related Science, Mathematics and Technology in Occupations (6)

(0-0-6) Courses will be offered only through a scheduled, written examination. (Written, performance and oral examinations in the field of specialization that the candidate is preparing to teach.)

CTE 382 - Manipulative Skills in Occupations (6)

(0-0-6) Offered only through scheduled, technical competence examinations. (Written, performance and oral examinations in the field of specialization that the candidate is preparing to teach.)

CTE 383 - Knowledge of Related Subjects in Occupations (6)

(0-0-6) Courses will be offered only through a scheduled, oral examination. (Written, performance and oral examinations in the field of specialization that the candidate is preparing to teach.)

CTE 388 - Methods of Curriculum Development (3)

(3-0-3) A comprehensive study of current curriculum content in career and technical education. Emphasis on modifying and developing new curricula. Field experience required.

Prerequisite: CTE 207

CTE 392 - Methods of Instructional Technology (3)

(2-2-3) Holistic approach to curriculum development with an introduction to the use of technology to develop and enhance curriculum and instruction. Field experience required.

Corequisite: CTE 392L

CTE 393 - Methods of Career and Technical Education (3)

(3-0-3) Basic principles of teaching and learning with practical applications of procedures used in career and technical education programs.

CTE 394 - Practicum in Career and Technical Education (4-8)

(4 to 8 hrs.) Each student is assigned to an approved student teaching center offering comprehensive teaching experiences at the preparation-industrial education level. Directed observations and supervised teaching in approved area vocational school or an extension center in the trade and area in which the certificate is desired. Candidates for the bachelor's degree complete a minimum of 90 hours of supervised student teaching, 120 hours of directed observation and 40 hours of participation. This experience carries eight hours of credit.

Prerequisite: CTE 393

CTE 395 - Special Problems in Career and Technical Education (1-3)

(1 to 3 hrs.) Individual problems dealing with specific areas in the teaching field of the student. Opportunity of pursuing a technical problem in a laboratory orientation is provided. Conferences with the instructor are scheduled as needed.

CTE 396 - Evaluation in CTE (3)

(3-0-3) The study of methods of evaluation, how to prepare evaluation instruments; techniques of assessing technical competency; explanation of test results; and the improvement of instruction.

Prerequisite: MATH 152

CTE 400 - Preparation for Technology Education (4)

(4-0-4) Seminar designed for individuals who have four years of successful teaching experience and desire dual certification to include industrial education at the orientation and exploration levels.

CTE 401 - Preparation for Career and Technical Education (4)

(4-0-4) Seminar designed for individuals who have four years of successful teaching experience at the industrial education orientation and exploration levels and desire dual certification to include industrial education at the preparation level.

CTE 470 - Methods of Instruction (3)

(3-0-3) The principles of instructional methods which apply to the teaching of career and technical education subject matter. Field experience required.

CTE 478 - Student Teaching Practicum (12)

(12-0-12) Each student is assigned to an approved student teaching center offering comprehensive teaching experience in career and technical education.

CTE 496 - Organization and Management of the Laboratory (2)

(2-0-2) Principles of shop and class organization and management, including program planning and development of shops and laboratories; selecting and purchasing equipment and supplies; and organizing and administering the instructional program. Field experience required.

CTE 497 - Seminar in Career and Technical Education (1)

(1-0-1) Current problems, issues and trends in vocational education.

CTMR - Computed Tomography/Magnetic Resonance

CTMR 403 - Computed Tomographic Physics and Instrumentation (3)

(3-0-3) The study of concepts and theories of computerized tomographic physics and instrumentation with emphasis on areas such as systems operation, imaging processing artifacts and image quality. Three hours of didactic experience per week.

Prerequisite: CTMR 405 and CTMR 413

CTMR 405 - Computed Tomography/Magnetic Resonance Sectional Anatomy (4)

(4-0-4) A study of gross anatomy utilizing a systemic approach to identify and analyze anatomic structures as imaged by computed tomography and magnetic resonance. Emphasis will be placed on relationship and functional analysis of systems.

CTMR 413 - Advanced Patient Care (3)

(3-0-3) An advanced study of patient care with emphasis on patient care specific to the Computed Tomography and Magnetic Resonance specialty areas including acute medical emergencies and safety practices. Completion of the Advanced Cardiac Life Support (ACLS) course is a requirement for passage of this course. The course content will be consistent with the American Registry of Radiologic Technologists (ARRT) Content Specifications. Admission to CTMR program is required.

Corequisite: CTMR 405

CTMR 443 - Imaging Procedures in Computed Tomography (4)

(4-0-4) A study of imaging procedures and protocols utilized in computerized tomography examinations. Emphasis will be placed on protocol selection for imaging application and pathology of areas such as the head, neck, spine, chest, abdomen, pelvis, musculoskeletal system and interventional/special procedures. Pre-examination, patient care preparation and contrast administration procedures will be discussed.

Prerequisite: CTMR 405 and CTMR 413

CTMR 451 - Magnetic Resonance Physical Principles of Image Formation (4)

(4-0-4) This course is designed to provide the student with a comprehensive overview of magnetic resonance. Topics include instrumentation, magnetism, MR signal production, tissue characteristics, spatial localizations, pulse sequencing, imaging parameters/options, special applications, safety and quality assurance.

Prerequisite: CTMR 403, CTMR 443, CTMR 467 and CTMR 483

CTMR 455 - Imaging Procedures in Magnetic Resonance (3)

(3-0-3) The study of imaging techniques and pathological correlation for the various regions in the body. Specific clinical application, coils, scan sequences, protocols and positioning criteria will be covered in this course.

Prerequisite: CTMR 403, CTMR 443, CTMR 467 and CTMR 483

CTMR 461 - Magnetic Resonance Practicum (8)

(0-24-8) Clinical application of technical and professional aspects of magnetic resonance in a healthcare setting. The student will be required to demonstrate clinical competency in a number and variety of procedures as required by the American Registry of Radiologic Technologists (ARRT). Admission to the CTMR program is required.

Prerequisite: CTMR 403, CTMR 405, CTMR 413, CTMR 443, CTMR 467 and CTMR 483

Corequisite: CTMR 451, CTMR 455, and CTMR 499C

CTMR 467 - Computed Tomography Practicum I (8)

(0-24-8) A study of imaging procedures and protocols utilized in computed tomography examinations. Emphasis will be placed on protocol selection for image application; pathology of areas such as the head, neck, spine, chest, abdomen, pelvis, musculoskeletal system; and interventional/special procedures. Pre-examination, patient care preparation, and contrast administration procedures will be discussed.

Prerequisite: CTMR 405 and CTMR 413

CTMR 483 - Seminar in Computed Tomography (2)

(2-0-2) This is designed to assess the student's knowledge and application of computerized tomography. Based on the assessment results, the faculty will provide review and learning experiences to assist the student in meeting identified learning needs. Two hours of didactic experience per week.

Prerequisite: CTMR 405 and CTMR 413

CTMR 499C - Seminar in Magnetic Resonance (3)

(3-0-3) Major principles of magnetic resonance from previous courses are applied. Using scientific inquiry, the student will complete a capstone project to be presented at an imaging conference. In addition, students will review magnetic resonance content with consideration of clinical systems, physical principles and imaging applications.

Prerequisite: Take CTMR 403, CTMR 443, CTMR 467 and CTMR 483

Corequisite: CTMR 451

CVM - Convergent Media

CVM 110 - History of Communication Media (3)

(3-0-3) This course is designed to provide information about the various media that make up the field of communication and includes the historical development and the interrelationships among the various areas of communication. Also focuses on the ethical and social dilemmas facing today's media and communication practitioners.

CVM 140 - Field Production Practices (3)

(2-2-3) An introduction to the practical applications of field production as it relates to audio, video and new media. Practice in application of stages of production. Includes program/product conception and various forms of dissemination.

Corequisite: CVM 140L

CVM 177 - Convergent Media Practicum (1)

(0-1-1) Practical experience and professional opportunities in newsgathering, writing, reporting and news presentation.

CVM 201 - Media Writing (3)

(3-0-3) An introduction to methods, styles, techniques and formats used in nonfiction writing for the media. Includes instruction on legal, ethical and social considerations.

CVM 205 - Introduction to Photojournalism (3)

(3-0-3) This course will introduce the student to the methods of evaluating photographs for the purpose of "telling" or illustrating stories for a reader of newspapers and online news presentation. A combination of skills will be taught in this course on parallel tracks including use of the digital camera, composition techniques, best methods of relationship building and

interview skills within a community, and photo editing with standard photography software.

CVM 210 - Media Literacy (3)

(3-0-3) This course is designed to explore issues of media influence on everyday life and acquaint the general student with the way in which media shapes aspects of modern society. This course satisfies the Level 3 Ethics and Civic Engagement SBS requirement for general education.

CVM 240 - Elements of Studio Production I (3)

(2-2-3) An introduction to the basic production elements for audio and video. Includes message development and differentiation for various mediums.

Corequisite: CVM 240L

CVM 250 - Content Gathering Techniques (3)

(3-0-3) Study and application of sources, methods and technologies used in gathering and producing material for print, broadcast and online presentation. Includes instruction on the legal and ethical responsibilities of producing and disseminating multimedia content.

Prerequisite: CVM 140 and CVM 201

CVM 277 - Convergent Media Practicum (1)

(0-1-1) Practical experience and professional opportunities in newsgathering, writing, reporting and news presentation.

CVM 301 - News Writing and Reporting (3)

(3-0-3) Gathering, organizing and writing news for mass media.

Prerequisite: CVM 140 AND CVM 201

CVM 305 - Documentary Photography (3)

(3-0-3) In a world that has embraced video as the prime presentation of news and information, the single photographic moment is making a comeback as an in-depth storytelling practice. Through lectures, discussions, hands-on projects and presentations, students will continue to effectively learn to use the camera, demonstrate an understanding of relationship building with subjects and demonstrate an understanding of documentary photography and its purposes.

Prerequisite: CVM 205 or consent of instructor

CVM 320 - Feature and Documentary Writing (3)

(3-0-3) Advanced theory and practices of writing for the electronic medium. Emphasis is placed on writing and production of features and documentaries for radio, television and cable systems.

Prerequisite: CVM 140 and CVM 201

CVM 321 - Editing Tools and Techniques (3)

(3-0-3) Analysis of video editing techniques and practical application of those techniques via appropriate digital non-linear editing systems.

Prerequisite: CVM 140

CVM 331 - Corporate Video Production (3)

(3-0-3) A study in the practical application of video production for the corporate marketplace. Program creation and execution will be dealt with at various stages of production.

Prerequisite: CVM 140 and CVM 201

CVM 340 - Studio Practices (3)

(2-2-3) TV studio production techniques and an introduction to directing skills in a laboratory setting.

Prerequisite: CVM 140

Corequisite: CVM 340L

CVM 350 - Audio Production and Direction (3)

(2-2-3) A study of the theory and application of audio production for convergent media.

Prerequisite: CVM 240

Corequisite: CVM 350L

CVM 377 - Convergent Media Practicum (1)

(0-1-1) Practical experience and professional opportunities in newsgathering, writing, reporting and news presentation.

CVM 399 - Special Topics (3)

(3-0-3) Study of specialized topics variable by semester and instructor and intended to enhance regular course offerings. Certain topics may require laboratory work. The course may be repeated for credit if the subtitle indicates different content is being offered.

CVM 401 - Advanced Multimedia News (3)

(3-0-3) Instruction in advanced, in-depth writing and reporting for the news for print, broadcast and online media. Provides instruction and hands-on experience covering public affairs and societal events and issues using methods and technologies necessary for producing and presenting news for integrated news media organizations. Includes instruction on the legal and ethical aspects of producing news for a diverse society.

Prerequisite: CVM 140, CVM 201, and CVM 250

CVM 410 - Social Media Strategies (3)

(3-0-3) Students will use research, strategy, and creativity to implement a hands-on social media campaign for a client. Students will be evaluated based on performance as an individual and a team member.

Prerequisite: COMS 333 or consent of instructor

CVM 452 - Issues in Contemporary Media (3)

(3-0-3) Treatment of current issues within the electronic media industry. Equates with GST 452.

CVM 454 - Popular Culture Analysis (3)

(3-0-3) A study in which we will analyze what exactly "pop culture" means, a history of the theories behind it, and the various ways it manifests in our modern society.

CVM 462 - Media Criticism (3)

(3-0-3) Examination of broadcasting in sociological, aesthetic, historical, psychological and humanistic terms.

CVM 464 - Public Opinion and the Media (3)

(3-0-3) A study of cultural, social and psychological aspects of public opinion and how it impacts and is influenced by the mass media. Includes analysis of public opinion's impact on the democratic process.

CVM 465 - Opinion Writing (3)

(3-0-3) Study and application of techniques and formats effective in writing opinion for the print media. Includes government, political, civic and social implications; legal and ethical guidelines.

Prerequisite: CVM 201

CVM 476 - Special Problems (1-3)

(1 to 3 hrs.) Research on an original project with appropriate written report within a subject area.

CVM 477 - Convergent Media Practicum (1)

(0-1-1) Practical experience and professional opportunities in newsgathering, writing, reporting and news presentation.

CVM 481 - Documentary Production (3)

(2-2-3) The study and application of theories and techniques used in documentary video production.

Prerequisite: ART 109, CVM 140, and CVM 201

Corequisite: CVM 481L

CVM 483 - Animation Production (3)

(2-2-3) The study of traditional animation production techniques. Application of the theories and techniques of traditional animation video production.

Prerequisite: ART 109 and CVM 140

Corequisite: CVM 483L

CVM 485 - Narrative Video Production (3)

(2-2-3) The study and application of production techniques and theories used in narrative video production.

Prerequisite: ART 109, CVM 140, and CVM 201

Corequisite: CVM 485L

CVM 492 - Media Law and Ethics (3)

(3-0-3) This course covers fundamental First Amendment principles and cases and surveys media law, regulations and ethics necessary for journalists working in print or broadcast media or in advertising and public relations.

CVM 499C - Senior Seminar Convergent Media (3)

(3-0-3) This course will entail individualized and group instruction, assessment and career preparation focused on disciplinary and life skills with an emphasis on the integration of knowledge and skills acquired in the program.

Prerequisite: ENG 100 and COMS 108

DMS - Diagnostic Medical Sonography

DMS 400 - Introduction to Sonography (1)

(1-0-1) An introduction to diagnostic medical sonography with emphasis on the history of sonography, the professional role of the sonographer, and the correlation of clinical laboratory tests to sonographic procedures. Four hours of didactic instruction per week for four weeks.

DMS 402A - Scanning Techniques I (1)

(0-2-1) An introduction to the performance of sonographic procedures. Emphasis is on equipment operation, image production and basic scanning techniques. Eight hours of laboratory experience per week for four weeks.

DMS 408 - Sonographic Sectional Anatomy (2)

(2-0-2) A study of sectional anatomy as visualized by sonographic imaging. Anatomic areas include abdominal viscera and vasculature, superficial structures, male and female pelvis, and fetal anatomy. Eight hours of didactic instruction per week for four weeks.

DMS 410 - Abdominal Sonography (2)

(2-0-2) A study of abdominal organs and superficial structures with emphasis on examination protocols, image production and evaluation, normal and pathologic interpretation and relation of laboratory values to pathologic conditions. Four hours of didactic instruction per week for the first eight weeks of the semester.

Prerequisite: DMS 400, DMS 402A and DMS 408

DMS 412A - Scanning Techniques II (1)

(0-2-1) Applied principles of sonographic procedures such as abdomen, superficial structures, and fetal measurements in a dedicated laboratory setting. Emphasis is on examination protocols, equipment operation, and clinical application. Four hours of laboratory experience per week for the first eight weeks of the semester.

Prerequisite: DMS 400, DMS 402A and DMS 408

DMS 416A - Scanning Techniques III (1)

(0-2-1) Applied principles of genitourinary sonography and introductory physics in a dedicated laboratory setting. Emphasis is on examination protocols, instrument controls and clinical applications. Four hours of laboratory experience per week for the first eight weeks of the semester.

Prerequisite: DMS 400, DMS 402A and DMS 408

DMS 418 - Genitourinary Sonography (2)

(2-0-2) A study of genitourinary sonography with emphasis on examination protocols, image production and evaluation, normal and pathological interpretation and relation of laboratory values to pathologic conditions. Four hours of didactic instruction per week for the first eight weeks of the semester.

Prerequisite: DMS 400, DMS 402A and DMS 408

DMS 420 - Sonographic Physics and Instrumentation I (2)

(2-0-2) The introductory study of sonographic physics and instrumentation with emphasis on sound wave concepts, beam patterns, transducers, pulsed echo instrumentation and image storage and display. Didactic content will be applied in corequisite scanning sessions. Four hours of didactic instruction per week for the first eight weeks of the semester.

Prerequisite: DMS 400, DMS 402A and DMS 408

DMS 426A - Scanning Techniques IV (1)

(0-2-1) Applied principles of sonographic procedures of the reproductive organs in the gravid state. Emphasis is on examination protocols, equipment operation, and scanning techniques. Four hours of laboratory experience per week for the first eight weeks of the semester.

Prerequisite: DMS 410, DMS 412A, DMS 416A, DMS 418, DMS 420 and DMS 430

DMS 428 - Obstetrical Sonography (2)

(2-0-2) A study of sonographic techniques for evaluating the reproductive organs in the gravid state, including the role of the diagnostic medical sonographer in fetal assessment of normal and abnormal conditions. Four hours of didactic instruction per week for the first eight weeks of the semester.

Prerequisite: DMS 410, DMS 412A, DMS 416A, DMS 418, DMS 420 and DMS 430

DMS 430 - Sonography Internship I (6)

(0-24-6) Clinical application of technical and professional aspects of diagnostic sonography in a healthcare setting with emphasis on performance of areas such as gynecology, abdomen and superficial anatomy. Eight hours of clinical experience per week for the first eight weeks. Forty hours of clinical experience per week for the second eight weeks of the semester.

Prerequisite: DMS 400, DMS 402A and DMS 408

DMS 438 - Selected Topics in Sonography (2)

(2-0-2) A study of advanced sonographic techniques including topics such as contrast media, physician-guided procedures and evaluation of the musculoskeletal system. Four hours of didactic instruction per week for the first eight weeks of the semester.

Prerequisite: DMS 410, DMS 412A, DMS 416A, DMS 418, DMS 420 and DMS 430

DMS 441 - Sonographic Physics and Instrumentation II (2)

(2-0-2) The advanced study of sonographic physics and instrumentation with emphasis on Doppler instrumentation, spectral analysis, color flow imaging, image characteristics and artifacts, quality assurance, bioeffects and safety considerations. Didactic content will be applied in corequisite scanning sessions. Four hours of didactic instruction per week for the first eight weeks of the semester.

Prerequisite: DMS 410, DMS 412A, DMS 416A, DMS 418, DMS 420 and DMS 430

DMS 442A - Scanning Techniques V (1)

(0-2-1) Applied principles of the advanced study of sonographic physics and instrumentation with emphasis on Doppler instrumentation, spectral analysis and color flow imaging in a dedicated laboratory setting. The student will also gain experience in developing a quality assurance program for an ultrasound department. Four hours of laboratory experience per week for the first eight weeks of the semester.

Prerequisite: DMS 410, DMS 412A, DMS 416A, DMS 418, DMS 420 and DMS 430

DMS 450 - Sonography Internship II (6)

(0-24-6) Clinical application of technical and professional aspects of diagnostic sonography in a healthcare setting which continue to build on experiences obtained in preceding sonography courses. Eight hours of clinical experience per week for the first eight weeks. Forty hours of clinical experience per week for the second eight weeks of the semester.

Prerequisite: DMS 410, DMS 412A, DMS 416A, DMS 418, DMS 420 and DMS 430

DMS 470 - Sonography Internship III (4)

(0-40-4) A continuation of technical and professional aspects of diagnostic sonography in a healthcare setting with emphasis on the role of the sonographer as an entry level practitioner. Forty hours of clinical experience per week for four weeks.

Prerequisite: DMS 426A, DMS 428, DMS 438, DMS 441, DMS 442A, and DMS 450

DMS 490 - Sonography Internship (3)

(0-32-3) A continuation of technical and professional aspects of diagnostic sonography in a healthcare setting with emphasis on the role of the student as an independent entry level sonographer. Evaluation includes areas such as abdomen, superficial structures, gynecology and obstetrics. Thirty-two hours of clinical experience per week for four weeks.

Prerequisite: DMS 470

DMS 499C - Seminar in Sonography (3)

(3-0-3) A review of diagnostic sonography content with consideration of clinical systems, sonographic patterns and technical aspects. Ten hours of didactic experience per week for four weeks.

Corequisite: DMS 490

ECC - Engineering, Construction and Civil

ECC 101 - Introduction to Construction Engineering (3)

(3-0-3) Discussion of various aspects of the construction industry including typical building methods, cost factors and personnel requirements. Includes residential and commercial building.

ECC 202 - Statics and Dynamics (3)

(3-0-3) This course presents the theory and applications of engineering mechanics: statics and dynamics. The topics include equilibrium, trusses, frames, beams, work and energy, impulse and momentum, etc.

Prerequisite: PHYS 201 or higher and MATH 174 or higher

ECC 203 - Construction Methods and Materials I (3)

(2-2-3) An investigation of various construction and building techniques, including traditional and modified methods. Laboratory will include model and prototype development.

Corequisite: ECC 203L

ECC 204 - Codes, Contracts and Specifications (3)

(3-0-3) Exposure to local and state codes and architectural specifications necessary to meet contract requirements. Introduction to various code organizations and file systems.

ECC 208 - Interpretation of Technical Drawings (3)

(2-2-3) A study of the application, interpretation, and visualization of technical drawings in residential, commercial and industrial construction projects. Students will learn to use technical drawings to communicate ideas, plan schedules and control industrial components, materials, and methods.

Prerequisite: 1. EMM 103 and 2. ECC 101 or EEC 140 or EMM 186 and 3. MATH 174 or higher

Corequisite: ECC 208L

ECC 305 - Architectural Design (3)

(2-2-3) Instruction centers around the problems, practices and techniques of the residential and commercial architectural design and drafting, including historical development.

Prerequisite: 1. EMM 103 and 2. MATH 174 or higher

Corequisite: ECC 305L

ECC 306 - Construction Project Management (3)

(2-2-3) The planning, scheduling and control of project resources in the construction industry. Topics include work breakdown structures, precedence grids, precedence node diagrams, analytical methods for network solutions, resource scheduling, leveling and allocation, time-cost tradeoffs and project-scheduling simulation.

Prerequisite: 1. ECC 101 2. MATH 141 or higher

Corequisite: ECC 306L

ECC 307 - Hydrology (3)

(3-0-3) A study of surface and subsurface fluid flow systems. Basic areas will include open and closed channel flow, hydrogeology, sedimentation/erosion control and applicable state/federal regulations.

Prerequisite: MATH 152 or higher

ECC 308 - Estimating and Construction Costs (3)

(3-0-3) This course introduces the principles of construction cost, estimating of the related materials, labor, and machines including quantity takeoff, pricing of materials, classification of work, labor and overhead.

Prerequisite: ECC 208

ECC 310 - Principles of Surveying (3)

(2-2-3) A study of modern surveying methods and equipment, field and office procedures and surveying applications in the planning, design, layout and construction of our physical environment and infrastructure.

Prerequisite: ECC 202 and EMM 103

Corequisite: ECC 310L

ECC 402 - Structural Design (3)

(3-0-3) This course provides an understanding of the behavior of structural systems, and introduces basic structural engineering concepts and calculations applicable in the early stages of the design process in order to select and size the most appropriate structural systems based on the latest building codes.

Prerequisite: ECC 202

ECC 403 - Construction Methods and Materials II (3)

(3-0-3) A continuation of ECC 203, this course is a study of the technical and management methods in construction techniques, with concentration on heavy or horizontal construction. Topics include excavation methods,

equipment requirements, types, selection and scheduling, commercial high explosives, blasting pattern design and legal/safety considerations.

Prerequisite: ECC 203

ECC 404 - Commercial Architectural Design (3)

(2-2-3) A technical course covering the fundamental principles, techniques and practices of commercial architectural design and drafting.

Prerequisite: 1. EMM 215 2. MATH 152 or higher

Corequisite: ECC 404L

ECC 405 - Civil Drafting (3)

(2-2-3) Computerized drawings involving roadways, bridges, large developments, plats and deeds.

Prerequisite: 1. EMM 103 2. MATH 152 or higher

Corequisite: ECC 405L

ECC 410 - Construction Surveying (3)

(2-2-3) A study of advanced surveying applications in the planning, design, layout and construction of our physical environment and infrastructure, with emphasis placed on the development of effective strategies to solve modern surveying problems within the construction industry.

Prerequisite: ECC 310

Corequisite: ECC 410L

ECC 415 - Transportation Engineering (3)

(3-0-3) This course introduces basic concepts of transportation engineering. The topics include earthwork, geometric design of highways, traffic light, pavement design, traffic control and analysis at signalized intersections, and in introduction to airport layout and components.

Prerequisite: ECC 203

ECC 431 - Sustainable Construction Methods (3)

(3-0-3) This course will focus on sustainable construction methods and materials concerning commercial, residential and industrial projects including LEED, lean and green construction technology and theory in the global context. Students will also examine the social, economic, and environmental impacts of sustainable and green construction and analyze the impact on the industry and the planet.

Prerequisite: ECC 101 and MATH 174 or higher

ECC 460 - Geotechnical Engineering (3)

(3-0-3) This course provides students a basic understanding of the theoretical and empirical principles of geotechnical engineering. It focuses on the fundamental concepts of both soil mechanics (soil properties and behavior) and foundation (the design of foundations on soils and rock). The class covers: engineering properties of soils, soil exploration, compaction, stabilization, and consolidation; water in soil; subsurface stresses; settlement of structures; shear strength; shallow and deep foundations, and an introduction to geotechnical earthquake engineering.

Prerequisite: ECC 202 and ECC 203

ECON - Economics

ECON 101 - Introduction to Economics (3)

(3-0-3) This course is an introduction to economics and the economy. Like any science, economics has both content and methodology. The content is the set of human or social actions and interactions that make up the economy. The methodology is "the economic way of thinking," the set of concepts, principles and perspectives that make up the discipline of economics. Students will learn how the discipline of economics helps them to understand the economy and make better decisions. The objective of the course is to develop a working understanding of some of the issues and economic concepts that everyone needs in order to fully participate in American life. The course will introduce students to both microeconomics and macroeconomics. This course provides fundamental material on the subject matter, and is usually taken as a first course in economics. This course satisfies the Level 2 Knowledge SBS requirement for general education.

ECON 102 - Economic History of the U.S. (3)

(3-0-3) A study of the economic forces and institutions directly responsible for the development of the United States as a major economic power. The economic transformation of the United States from an agricultural to an industrial-service nation. Problems of income distribution, labor-technology interaction and mixed capitalism.

ECON 201 - Principles of Macroeconomics (3)

(3-0-3) An examination of what determines the total output of goods and services, the rate of unemployment, the price level, the rate of inflation, rates of interest and foreign exchange rates within a mixed price-market economic system. This course satisfies the Level 2 Knowledge SBS requirement for general education.

ECON 202 - Principles of Microeconomics (3)

(3-0-3) A study of the principles of consumer and firm behavior within a capitalistic price-market system. It examines the manner of production, factor markets and degrees of competition. Also, the effects of government regulation and market intervention are analyzed.

ECON 302 - Labor Economics (3)

(3-0-3) Labor management relations, the labor movement, labor legislation, government control and regulation, economic inequality, standards of living and industrial conflicts.

Prerequisite: Pre-Business Core

ECON 305 - Comparative Economic Systems (3)

(3-0-3) A study of influential theories of the major economic systems: Capitalism, Marxism and Communism. Descriptive analysis of the operation of the corresponding economies.

Prerequisite: Pre-Business Core

ECON 315 - Resource Economics (3)

(3-0-3) A study of how economic behavior influences the supply of and demand for natural resources. The course examines the manner of production, factor markets and degrees of competition among resources. Also, the effects of government regulation and market interventions are analyzed.

Prerequisite: Pre-Business Core

ECON 339 - Cooperative Education III (1-8)

(1 to 8 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a junior level status. Maximum of three hours of cooperative education credit (ECON 339/439) available for option credit.

Prerequisite: Consent of school cooperative education coordinator

ECON 341 - Public Finance (3)

(3-0-3) Public expenditures; public revenue; taxation; public credit; financial administration of government.

Prerequisite: Pre-Business Core

ECON 342 - Money and Banking (3)

(3-0-3) Origin, development and functions of money; banking functions and processes; the Federal Reserve System and monetary policy. Equates with FIN 342.

Prerequisite: Pre-Business Core

ECON 350 - Intermediate Microeconomics (3)

(3-0-3) Analysis of the behavior of the household and the firm, with emphasis on the role of prices in allocating resources, organizing production and distributing goods and services.

Prerequisite: ECON 202 and one of the following: MATH 123, MATH 131,,MATH 135, MATH 141, MATH 152, MATH 174 or MATH 175

ECON 351 - Intermediate Macroeconomics (3)

(3-0-3) This course examines and explains, at the intermediate level, what determines the level of output in the economy and the rate of growth in the level of output, as well as the factors that determine the unemployment rate, the price level, the rate of inflation, the interest rate and foreign exchange rates. In addition, it examines the effects of government policies, especially monetary and fiscal policy, on the above factors.

Prerequisite: Pre-Business Core

ECON 389 - Honors Seminar in Economics (3)

(3-0-3) Analysis of contemporary economic problems and policy alternatives. Topics may vary each semester.

Prerequisite: Pre-Business Core

ECON 399 - Special Class (1-4)

(1 to 4 hrs.) Workshops on various economic subjects will be presented periodically to supplement the basic course offerings in economics. Credit toward degree programs must be approved by the student's advisor and the department chair.

Prerequisite: Pre-Business Core

ECON 401 - Environmental Economics (3)

(3-0-3) Analysis of the economic reasons contributing to environmental degradation and exploration of economic policies to reduce this problem.

Prerequisite: Pre-Business Core

ECON 403 - Urban and Regional Economics (3)

(3-0-3) Analysis of location patterns, land use, urban and regional structure and growth, and development strategies. Emphasis is placed on contemporary problems and possible solutions.

Prerequisite: Pre-Business Core

ECON 410 - History of Economic Thought (3)

(3-0-3) The origin and development of economic theories from the Mercantilist through modern times.

Prerequisite: Pre-Business Core

ECON 439 - Cooperative Education IV (1-8)

(1 to 8 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a senior level status. Maximum of three hours of cooperative education credit (ECON 339/439) available for option credit.

Prerequisite: Consent of school cooperative education coordinator

ECON 447 - International Economics (3)

(3-0-3) International trade theory, international monetary relationships and the balance of payments. Emphasis is placed on contemporary problems and possible solutions. Equates with IST 447.

Prerequisite: Pre-Business Core

ECON 455 - Economic Development and Growth (3)

(3-0-3) Classical and modern theories of growth and development and their application in both advanced and underdeveloped nations.

Prerequisite: Pre-Business Core

ECON 456 - Introduction to Econometrics (3)

(3-0-3) Application of statistical methods to economic and managerial theories. These methods are used to both test the theories with observed data and to estimate the nature and strength of the relationship predicted by the theories.

Prerequisite: BBA 315

ECON 476 - Special Problems in Economics (1-3)

(1 to 3 hrs.) This course is an independent study of economic problems of special interest. Students must present in writing a suggested problem and justification for the study prior to registration. Each request will be considered on its own merit in relation to the special needs of the student.

Prerequisite: Completion of 21 credit hours of economics and finance coursework and consent of associate dean

ECON 499 - Selected Workshop Topics (1-4)

(1 to 4 hrs.) Workshops on various economic subjects will be presented periodically to supplement the basic course offerings in economics. Credit toward degree programs must be approved by the student's advisor and the associate dean.

Prerequisite: Pre-Business Core

EDAH - Adult and Higher Education

EDAH 094 - ACT Preparation (1)

(1-0-1) This course is designed to help MSU students enhance standardized test-taking skills and remediate academic deficiencies in order to improve ACT scores. Individualized tutorials outside of class time will be a significant part of the course.

EDAH 102 - Study Skills (1)

(1-0-1) Course is designed to provide special training in the skills and techniques necessary for college-level study.

EDAH 199 - Selected Topics (1-3)

(1 to 3 hrs.) Investigation of specific problem areas in the field of study. May be repeated in additional subject areas.

EDAH 299 - Selected Topics (1-3)

(1 to 3 hrs.) Workshop for specifically designated task orientation in education. May be repeated in additional subject areas.

EDEC - Early Childhood Education

EDEC 125 - Introduction to the Early Childhood Profession (3)

(3-0-3) A focus on the principles of child growth and development from birth through age five; it will explore techniques for observing and recording children's behavior, strategies to manage an effective program operation, and maintaining a commitment to professionalism. This course is only open to those in the Child Development Associate Program (CDA).

EDEC 150 - Skills for Early Childhood Educators (3)

(3-0-3) A study of skills needed by teachers of children ages birth to five that will promote the physical, intellectual, social and emotional development of young children. This course is only open to those in the Child Development Associate Program (CDA).

EDEC 199 - Workshop (1-3)

(1 to 3 hrs.) Workshop for specifically designated task orientation in early childhood education. Conferences with instructor by arrangement. Maximum of six semester hours may be earned under this course number.

EDEC 253 - Child Growth and Development (3)

(2-2-3) Behavioral characteristics in growth and development; positive approach to child guidance; importance of the role of parents and child care givers. Directed practicum in observation of preschool children.

Prerequisite: EDF 207

EDEC 254 - Preschool Administration (3)

(3-2-3) The study of the organization and administration of preschool programs; role of parenthood education; supervised experiences in planning and guiding children's activities in a preschool program. Completion of the required field experience is an integral part of this course.

EDEC 255 - Assessment of Young Children (3)

(3-1-3) An introduction to formal and informal assessment techniques to be used with young children (0-5). This course includes assessment of all developmental domains for children with and without disabilities. Completion of the required field experience is an integral part of this course.

Prerequisite: EDEC 253

EDEC 276 - Directed Study (1-3)

(1 to 3 hrs.) Directed study of specific areas in early childhood education. Conferences with instructor by arrangement. Maximum of six semester hours may be earned under this course number.

EDEC 301 - At-Risk Infants and Toddlers (3)

(3-1-3) Development and causes of difficulties experienced by at-risk infants and toddlers, as well as early intervention approaches to be used with these children and their families. Completion of the required field experience is an integral part of this course.

Prerequisite: EDSP 230, EDEC 253, EDEC 416, and IECE 311

EDEC 345 - Preschoolers with Special Needs (3)

(3-1-3) This course will encompass the characteristics, needs and assessment of exceptional children during the preschool years. Needs and involvement of families will be an important emphasis. Completion of the required field experience is an integral part of this course.

Prerequisite: EDSP 230, EDEC 253, IECE 311, and EDEC 418

EDEC 399 - Workshop (1-3)

(1 to 3 hrs.) Continuation of EDEC 199.

EDEC 412 - Kindergarten Curriculum (3)

(3-1-3) This course investigates educational needs and interests of kindergarten children and provides optimal learning experiences through a variety of context. Designing and implementing an authentic kindergarten curriculum that utilizes KY Core Academic Standards for Kindergarten children through developmentally appropriate activities (best practices) are integral parts of the course. Completion of the field experience hours at kindergarten is required.

EDEC 416 - Infant/Toddler Program Planning (3)

(3-1-3) Current programs, techniques, environments and research relating to infant stimulation. Emphasis on home intervention, theory and practices. Completion of the required field experience is an integral part of this course.

Prerequisite: EDEC 253, EDEE 305 and IECE 311

EDEC 418 - Preschool Program Planning (3)

(3-1-3) The research and study of early childhood development curriculum models, activities, plans and implementation of programs in a variety of environments. Completion of the required field experience is an integral part of this course.

Prerequisite: EDEC 253, EDEE 305, and IECE 311

EDEC 425 - Early Childhood Practicum (9)

(9 hrs.) Placement in an early childhood setting on the basis of one week placement for each credit hour. Observation, participation, teaching conferences with supervisor, co-curricular activities and conferences with supervising teacher are required. If necessary, students may continue this experience over two consecutive semesters.

Prerequisite: IECE 301, IECE 345, EDEC 416 and EDEC 418

Corequisite: EDEC 499C

EDEC 470 - Directed Research (1-3)

(1 to 3 hrs.) Directed research study of a professional nature. Conferences with instructor by arrangement. Maximum of six semester hours may be earned under this course number.

EDEC 499C - Senior Seminar (3)

(3-0-3) Orientation for transition from the role of student to the role of professional and further understanding of the role of professionals in the field of early care and education. Seminar discussion format is used. If necessary, students may continue this experience over two consecutive semesters.

Corequisite: EDEC 425

EDEE - Early Elementary/P-5 Education

EDEE 305 - Learning Theories and Practices in Early Elementary (3)

(3-0-3) A comprehensive study of contemporary developments in the field of early elementary education including the applications of learning theories to classroom practices; the historical and philosophical origins of current curricular content and practices in early education; and an examination of research findings; study of the impact of familial, economic and social factors on school performance of learners in the P-5 range.Field experience in P-5 are an integral part of this course.

Prerequisite: EDF 207 and EDF 211 or EDEC 253

EDEE 321 - Teaching Math in Early Elementary Grades (3)

(2-2-3) *Admission to TEP is required.* An exploration of elementary mathematics instruction methods, assessment and materials. Emphasis is on connecting physical models, appropriate spoken dialog and mathematics symbols to help children construct an understanding of essential number concepts. Fifteen hours of field experiences in P-5 are an integral part of this course.

Prerequisite: MATH 231

Corequisite: SCI 490 and EDUC 482

EDEE 322 - Teaching Social Studies in Early Elementary Grades (3)

(2-2-3) *Admission to TEP is required.* This course will explore the scope and sequence of understandings, attitudes, and skills taught in early elementary social studies programs; and will examine various methodologies used in the early elementary grades of P-5. Field experiences in P-5 are an integral part of this course.

Prerequisite: EDEM 330

Corequisite: EDEE 323 and EDEE 331

EDEE 323 - Language Arts for Early Elementary (3)

(2-2-3) *Admission to TEP is required.* Role of language arts in the early elementary curriculum. Diagnosis of children's communication skills, needs, and subsequent teaching techniques are central to the course. Areas of emphasis include language development, listening and thinking skills, speaking, written expression, spelling and handwriting. Field experience is an integral part of this course. Requires TEP admission.

Prerequisite: EDEE 327 and EDEM 330

Corequisite: EDEE 323 and EDEE 331

EDEE 327 - Literature and Materials for Young Readers (3)

(3-0-3) A survey of children's literature from oral tradition through contemporary times, including all types of literature and media appropriate for early elementary P-5. Emphasis is on criteria for evaluation, selection and use of books and materials as related to the developmental needs and interests of children. Completion of the required field experience is an integral part of this course.

Prerequisite: EDF 207

EDEE 331 - Reading for Early Elementary Teachers (3)

(2-2-3) *Admission to TEP is required.* Material and methods of teaching basic reading skills in grades P-5. Students are taught how to teach subskills of reading readiness, vocabulary development, comprehension, and study skills. Assessment and interpretation of reading abilities will be utilized in designing classroom instruction. Field experiences in P-5 are an integral part of this course.

Prerequisite: EDEM 330

Corequisite: EDEE 322 and EDEE 323

EDEE 423 - Supervised Student Teaching Practicum (4-12)

(4 to 12 hrs.) *Admission to TEP is required.* Student is assigned to student teaching center during which time observation, participation and student teaching are done. The student teaching must be done in nonadjacent grades splitting the six-week period between two of the grades. Special conferences with supervising teacher, attendance and participation in faculty meetings and out-of-school activities required.

Corequisite: EDEM 499C

EDEL - Elementary Education

EDEL 096 - Strategic Reading I (3)

(3-0-3) Developmental reading course for students whose ACT enhanced reading score identifies them as needing readiness course work at the Reading I level. Information about the college readiness standards can be found on Morehead State University's Developmental Education website. Course provides diagnostic comprehension, and reading rates are stressed.

EDEL 097 - Strategic Reading II (3)

(3-0-3) Developmental reading course for students who have completed EDEL 096 with a grade of "C" or better, or whose ACT enhanced reading score identifies them as needing readiness course work at the Reading II level. Information about the college readiness standards can be found on Morehead State University's Developmental Education website. Course provides diagnostic comprehension, and reading rates are stressed.

Prerequisite: "C" or better in EDEL 096, ACT Reading score of 18-19, or COMPASS Reading score of 77

EDEL 199 - Workshop (1-3)

(1 to 3 hrs.) Workshop for specifically designated task orientation in elementary education. Maximum of six semester hours may be earned under this course number.

EDEL 250 - Practicum (1-6)

(1 to 6 hrs.) Students will demonstrate competency in skills necessary to nurture and promote children's physical, social, emotional and intellectual growth in a child development framework. Experiences include placement with children from birth to age five in either a classroom or simulated classroom laboratory. This course is open only to those enrolled in child development program training.

EDEL 276 - Directed Study (1-3)

(1 to 3 hrs.) Directed study of specific areas in elementary education. Topic must be approved in advance by instructor. Conferences with instructor by arrangement.

EDEL 302 - Integrating Technology into the Classroom (3)

(3-0-3) Focus on the principles of instructional technology and the appropriate integration of technology into the classroom for both teaching and learning. Production projects will be required. Completion of the required field experience is an integral part of this course.

Corequisite: 1. (P-5): EDSP 367 and EDEM 330, or 2. (5-9): EDMG 347 and EDMG 330

EDEL 333 - Fundamentals of Elementary Education (4)

(3-1-4) *Admission to TEP is required.* Introduction to content areas of the elementary curriculum, including teaching methods and materials. Emphasis is placed on the role of special teachers in the total school program.

EDEL 470 - Directed Research (1-3)

(1 to 3 hrs.) Independent research study of a professional nature. Conferences with instructor by arrangement. Maximum of six semester hours may be earned under this course number.

EDEM - Early Elementary and Middle Grades Education

EDEM 330 - Foundations of Reading (3)

(2-2-3) Must have completed 24 semester hours. (Orientation/exploration, preparation level industrial education students are exempt from prerequisites not required in their program). An explanation of the developmental aspects of the reading process in grades P-9 in terms of instruction, assessment, materials and classroom organization. Completion of the required field experience is an integral part of this course.

Prerequisite: EDSP 230 and EDEE 305

Corequisite: EDEL 302 and EDSP 367

EDEM 499C - Seminar in Effective Teaching (3)

(3-1-3) A critical exploration, analysis and implementation of the knowledge, skills and dispositions needed to effectively teach all students. This is a web-supported course, including both face-to-face and online instruction.

Prerequisite: Enrollment in one of the following: EDEE 423, EDMG 446, EDSP 435, EDSP 437, or IECE 425

EDF - Education Foundations

EDF 100 - Introduction to Education (3)

(3-0-3) An introduction to American schooling for students considering a career in teaching.

EDF 207 - Foundations of Education (3)

(3-0-3) Orientation for students considering teaching as a career. Course will survey the scientific, historic, philosophic, political and social foundations of the teaching profession. Field experiences are an integral part of the course. This course satisfies the Level 2 Knowledge SBS requirement for general education.

EDF 211 - Human Growth and Development (3)

(3-0-3) Survey of developmental patterns from birth to adolescence and their implications for improving the quality of life for the community of lifelong learners. Eight hours of field experience (observation and participation) is required and is a foundational element of the course.

EDF 311 - Learning Theories, Assessment and Diversity (3)

(3-0-3) *Admission to TEP is required.* This course considers the principles of learning and cognition, motivation, individual differences and adjustment of students, especially as they are applied to the classroom. This course includes study related to culturally diverse and exceptional populations,

including significant study of theoretical frameworks and examples of ways in which schools and societies maintain oppression of particular learner groups while privileging others. Theories, principles and concepts of human development, learning, motivation and assessment are presented and applied to the interpretation and explanation of human behavior in relation to classroom practices and the teaching profession, focusing on ways in which educators can advocate for equity in education via effective use of principles of learning and assessment. Field experiences in varied school settings are required and considered to be a foundational element of the course, as this advances candidates' applied and reflective understanding of the rich diversity represented in social groups and school organizations in America.

Prerequisite: EDF 211

EDF 322 - Gender and Education (3)

(3-0-3) This course explores gender issues that affect male and female students from preschool to postsecondary education. Equates with GST 322.

EDF 360 - History of Education (3)

(3-0-3) Education in ancient, medieval and modern periods; early American backgrounds; early campaigns for improvement of instruction and teacher training; development of present practices; great educators of each period and their contributions.

EDGC - Guidance and Counseling

EDGC 105 - Career Planning (2)

(2-0-2) Systematic information and guidance in career development provided which assists the student in making a realistic career decision consistent with needs, abilities, attitudes and personal goals.

EDMG - Middle Grades Education

EDMG 306 - Development and Learning in Middle Grades (3)

(3-0-3) A study of the principles of learning and motivation as they are applied in the middle grades. Completion of the required field experience is an integral part of this course.

Prerequisite: EDF 207 and EDF 211

EDMG 330 - Foundations of Reading for Middle Grades (3)

(2-2-3) An explanation of the developmental aspects of the reading process with particular emphasis on grades 5-9 skills and strategies needed for school and lifelong reading and learning. Included are instructional, assessment, materials and management as they pertain to middle grades reading instruction. Completion of the required field experience is an integral part of this course.

Prerequisite: EDF 207, EDF 211 and EDMG 306

EDMG 332 - Teaching Reading in the Middle Grades Content Areas (3)

(3-0-3) *Admission to TEP is required.* (Orientation/exploration, preparation level industrial education and vocational family and consumer science students are exempt from prerequisites not required in their program. EDMG 330 is a prerequisite for all students.) An explanation and evaluation of materials and methods of teaching the advanced reading skills in grades 5-9. The students are taught how to teach the skills needed for comprehension, study skills and content area reading. Assessment and interpretation of reading abilities will be utilized to design classroom instruction. Completion of the required field experience is an integral part of this course.

Prerequisite: EDF 207, EDF 211, and EDMG 330

EDMG 341 - Teaching Math in Middle Grades (3)

(3-0-3) *Admission to TEP is required.* Presentation of essential number concepts for middle grade learners with emphasis upon functional arithmetic and its application. The course will examine various methodologies used in the middle grades. Completion of the required field experience is an integral part of this course.

Prerequisite: Take EDMG 330, MATH 231, and MATH 232

EDMG 342 - Teaching Social Studies in Middle Grades (3)

(3-0-3) *Admission to TEP is required.* Course will explore the scope and sequence of understandings, attitudes and skills taught in middle grade social studies programs; and will examine various methodologies used in grades 5-9. Completion of the required field experience is an integral part of this course.

Prerequisite: EDMG 330

EDMG 343 - Teaching Language Arts in Middle Grades (3)

(3-0-3) *Admission to TEP is required.* Role of language arts in the middle grades curriculum. Diagnosis of children's communication skills, needs and subsequent teaching techniques are central to the course. Areas of emphasis include language development, listening and thinking skills, speaking, written expression, spelling and handwriting. Completion of the required field experience is an integral part of this course.

Prerequisite: EDMG 330, EDSP 230, EDMG 306, and EDMG 347

EDMG 347 - Literature and Materials for the Middle Grades (3)

(3-0-3) A survey of literature for the middle grades in which students will examine materials across the different genres, as well as various types of media appropriate for levels of certification in grades 5-9. Emphasis on criteria for evaluation and selection of materials, reading interest, needs and abilities of preadolescence. Completion of the required field experience is an integral part of this course.

EDMG 446 - Supervised Student Teaching (4-12)

(4 to 12 hrs.) *Admission to TEP is required.* Placement in a student teaching center during which time observation, participation and student teaching are done. Special conferences with the supervising teacher, attendance and participation in faculty meetings and co-curricular activities are also required.

EDMG 470 - Directed Research/Direct Study (1-3)

(1 to 3 hrs.) An independent study providing students the opportunity to work independently with a faculty member. The content of the course is dependent upon the student needs and must be approved by the faculty member and department chair.

EDSE - Secondary Education

EDSE 312 - Educational Methods and Technology (3)

(2-2-3) *Admission to TEP is required.* Introduction to classroom teaching skills and methods. The instructional process is covered with emphasis upon lesson preparation and presentation, including mediation of instruction; long-term and short-term instructional planning; human interaction skills. Completion of the required field experience is an integral part of this course.

EDSE 333 - Field Experiences in Secondary Classrooms (2)

(1-1-2) *Admission to TEP is required.* The course provides students with opportunities to develop the pedagogical knowledge and skills required to perform successfully the tasks of planning, implementing and evaluating instruction.

EDSE 399 - Selected Topics (1-3)

(1 to 3 hrs.) Investigation of specific problem areas in the field of study. May be repeated in additional subject areas.

EDSE 416 - Clinical Practice (12)

(12-0-12) *Admission to TEP is required.* This integrated professional clinical experience is comprised of two parts: 1) A seminar component, and 2) A public school classroom component. Eligible teacher candidates must successfully complete all aspects of this course as determined by state, university, an assigned university supervisor and public school cooperating teacher.

EDSE 451 - Curriculum and Instruction for Social Studies (3)

(3-0-3) *Admission to TEP is required.* Immerses students in social studies curriculum and instruction in preparation for the professional semester. Paired with EDSE 499D, this course provides intense emphasis and preparation for teaching core content and implementation of content teaching skills. Fifteen field hours required at Rowan County Senior High School, including at least two hours of whole class teaching. Credits not applied to history major or minor.

Corequisite: EDSE 499D

EDSE 483 - Classroom Organization and Management for Secondary Teachers (3)

(3-0-3) *Admission to TEP is required.* Designed to provide assistance in establishing organized, well managed regular classrooms, labs and other settings in secondary schools (8-12). Emphasis is placed upon developing procedures, adaptations, and rules for class organization and management. Various models of classroom management will be studied and options for dealing with disruptive students will be described. Completion of the required field experience is an integral part of this course.

EDSE 499C - Teacher in Today's School (2)

(2-0-2) An application of previous learning in development of an instructional unit taught during student teaching; an orientation to student teaching experience; miscellaneous activities relating to areas of teacher concerns, i.e., school law, pupil accounting, professional organizations, principles of classroom organization and management; and human interaction skills. Field experiences are an integral part of this course.

EDSE 499D - Teaching Social Studies (3)

(3-0-3) *Admission to TEP is required.* Analysis of contemporary strategies and methods for secondary social studies instruction. Course will emphasize KDE standards and education reform. Teaching portfolio initiated with 15 hours spent in collaboration with a secondary school teacher. At least three field hours will be spent in whole class instruction. Completion of the field experience requirement is an integral part of this course. Credits are not applied to history major or minor.

Prerequisite: HST 300

Corequisite: EDSE 451

EDSP - Special Education

EDSP 199 - Workshop (3)

(1 to 3 hrs.) Workshop for specifically designated task orientation in special education. May be repeated in additional subject areas. Maximum of six semester hours may be earned under this course number.

EDSP 230 - Education of Exceptional Children (3)

(3-0-3) Procedures for identification, education and treatment of exceptional children - the gifted, those with low intelligence, and handicapped - including behavioral deviations. Completion of the required field experience is an integral part of this course.

EDSP 231 - Field Experiences (3)

(0-2-1) Involves the student in on-site experiences in a variety of schools, institutions, and agencies providing services to the trainable mentally disabled.

EDSP 276 - Directed Study (1-3)

(1 to 3 hrs.) Independent study of a professional problem in special education.

EDSP 320 - Language Development and Intervention for Young Children (3)

(3-0-3) Introductory course in language development for educators working with young children. Completion of the required field experience is an integral part of this course.

EDSP 350 - Intellectual and Developmental Disabilities (3)

(2-2-3) Biological, physical, etiological, psychological and educational characteristics of individuals with intellectual and developmental disabilities. The likely needs of these individuals discussed in light of their underlying conditions. Completion of the required field experience is an integral part of this course.

Prerequisite: EDSP 230

EDSP 353 - Language Arts Teaching LBD (3)

(2-2-3) *Admission to TEP is required.* Designed to prepare the teacher of students with learning and behavior disorders in curriculum development and specialized procedures for teaching language arts, including reading, spelling, handwriting, language and written composition. Level III field experience is integral to this course.

Prerequisite: EDEM 330, EDSP 230, EDSP 350, EDSP 356, EDSP 360, and EDSP 367

EDSP 355 - Teaching Students with LBD (3)

(2-2-3) *Admission to TEP is required.* This course is designed to train teachers in instructional planning, management, and delivery of instruction. It includes strategic program planning incorporating due process procedures as specified in federal legislation, as well as systematic teaching methodology in learning disabilities, behavioral disorders and mild disabilities in public schools. The course also addresses classroom management and organization practices as they pertain to establishing optimal learning environments for all students. Level III field experience for this course completed in corequisite practicum.

Prerequisite: EDSP 230, EDSP 350, EDSP 356, EDSP 360, and EDSP 367

Corequisite: EDSP 359

EDSP 356 - Applied Behavior Analysis (3)

(2-2-3) Provides students with an introduction to applied behavior analysis procedures. The design and implementation of specific strategies that will support the establishment of effective instructional environments will be examined. Topics will include behavior management and training strategies, data-based programming and field-based teacher research methods. Completion of the required field experience is an integral part of this course.

Prerequisite: EDSP 230 and EDSP 350

EDSP 357 - Math and Content Teaching LBD (3)

(2-2-3) *Admission to TEP is required.* This course is designed to train teachers in the areas of learning disabilities and behavior disorders in curriculum development and modification, and in the planning, implementation, and evaluation of specially designed instruction, as required on a students' Individual Education Program, in mathematics, content areas and social-emotional skills. Level III field experience is integral to this course.

Prerequisite: EDSP 230, EDSP 350, EDSP 356, EDSP 360, EDSP 367, and EDSP 372

EDSP 359 - Practicum in Teaching for Students with LBD (1)

(0-2-1) *Admission to TEP is required.* This practicum is designed to provide trainee teachers with supervised experience in instructional planning,

management and systematic delivery of specially designed instruction for individuals with learning disabilities, behavior disorders and mild mental disabilities in public schools.

Corequisite: EDSP 355

EDSP 360 - Characteristics of Individuals with Learning Disabilities and Behavior Disorders (3)

(2-2-3) Biological, physical, etiological, psychological and educational characteristics of individuals demonstrating significant deviations in learning and behavior disorders. The likely needs of learning disabled and behavior disordered individuals discussed in light of their presenting problems. Completion of the required field experience is an integral part of this course.

Prerequisite: EDSP 230

EDSP 363 - Assistive Technology (3)

(3-1-3) This course develops basic knowledge and skills using assistive technology as a fundamental resource and support for people with disabilities. It is focused on the needs of the beginning professional in education or other human service fields. Legal mandates, funding sources, information resources, the range of available devices and software will be examined. Completion of the required field experience is an integral part of this course.

Prerequisite: EDSP 230 and EDSP 350

EDSP 365 - Including Students with Diverse Needs in the Classroom (3)

(2-2-3) *Admission to TEP is required.* This course will develop the skills and information needed by teachers to build inclusive learning communities within the schools. Crucial to achieving this end is: 1) the development of the skills needed to work with colleagues to create a classroom environment that accommodates the full range of diversity found in today's schools, and 2) a working knowledge of the legal requirements related to meeting the needs of diverse students. Completion of the required field experience is an integral part of this course.

Prerequisite: EDSP 230

Corequisite: EDEE 321 or EDEE 331

EDSP 367 - Educational Assessment (3)

(2-2-3) The purpose of the course is to train teachers to appropriately select, use, and interpret a variety of valid educational assessment instruments, both standardized and informal, in the following areas: initial identification of individuals with disabilities, instructional planning, monitoring of student progress, and in the evaluation of student performance and program effectiveness. Completion of the required field experience is an integral part of this course.

Prerequisite: EDSP 230, EDEE 305, or EDMG 306

Corequisite: EDEL 302 and EDEM 330

EDSP 370 - Transdisciplinary Assessment of Students with Moderate and Severe Disabilities (3)

(3-0-3) Involves procedures for comprehensive assessment of the educational need of individuals with moderate to severe disabilities including teaming with related services personnel, parents and others to design and implement an appropriate individual instructional program.

Prerequisite: EDSP 350

Corequisite: EDSP 371

EDSP 371 - Field Experiences in Transdisciplinary Assessment and Services for Students with Moderate and Severe Disabilities (1)

(0-2-1) This field placement in programs serving students with moderate and severe disabilities will provide the student with an opportunity to understand the relevant characteristics of this group, understand the roles of various personnel working with these students, and apply the assessment strategies being studied in the corequisite course.

Prerequisite: EDSP 350

Corequisite: EDSP 370

EDSP 372 - Transition to Adult Life (3)

(3-2-3) Prepares teachers of students with moderate and severe disabilities to effectively plan for and support students moving from school to adult life. This entails skill development in the area of planning processes, vocational training, support development, developing functional skills and preparation of Individualized Transition Plans (ITPs). Completion of the required field experience is an integral part of this course.

Prerequisite: EDSP 350

EDSP 373 - Curriculum for Students with Moderate and Severe Disabilities (3)

(3-0-3) *Admission to TEP is required.* Examines the components of functional curriculums for students with moderate and severe disabilities. Also examines strategies to manage a program of community-based instruction, to support the inclusion of students with moderate and severe disabilities in a variety of school and community settings and to conduct authentic assessment of student learning. Completion of the required field experience is an integral part of this course.

Prerequisite: EDSP 370

EDSP 374 - Teaching Students with Moderate and Severe Disabilities (3)

(3-1-3) *Admission to TEP is required.* Examines the critical components of an effective educational program for students with moderate and severe disabilities including the development of Individual Education Plans (IEPs), techniques for effective instruction, strategies for behavior management, approaches to systematic data based instruction, collaboration with families and interdisciplinary collaboration.

Prerequisite: EDSP 370

EDSP 375 - Practicum in Education of Students with Moderate and Severe Disabilities (2)

(0-4-2) *Admission to TEP is required.* Field placement in programs serving students with moderate and severe disabilities will provide the student with an opportunity to understand the physically, behaviorally and educationally relevant characteristics of this group and apply planning and teaching strategies being studied in the corequisite course.

Prerequisite: EDSP 370

EDSP 399 - Workshop (1-3)

(1 to 3 hrs.) Workshop for specifically designated task orientation in special education. May be repeated in additional subject areas. Maximum of six semester hours may be earned under this course number.

EDSP 435 - Supervised Teaching Practicum (4-12)

(4 to 12 hrs.) *Admission to TEP is required.* Placement is in public school special education and elementary education classrooms on the basis of one-week placement for each credit hour unit. Application made through coordinator of professional laboratory experiences.

EDSP 437 - Student Teaching Practicum in Education of Students with Moderate and Severe Disabilities (4-12)

(4 to 12 hrs.) *Admission to TEP is required.* Placement is in public school setting with students with moderate and severe disabilities. Development of a new teacher portfolio that documents mastery of the performance standards and criteria for teachers of students with moderate and severe disabilities. Application made through the director of student teaching.

EDSP 450 - Practicum in Community Support (4)

(0-8-4) Field placement in a program serving people with disabilities with accompanying tutorials. Provides student with opportunity to effectively integrate knowledge and skill during a 120-hour placement in a service setting.

EDSP 470 - Research Problems (1-3)

(1 to 3 hrs.) Independent research study of a professional problem. Conferences with instructor by arrangement.

EDUC - Education Professional

EDUC 140 - Educator Preparation Field Experiences I (1)

(1-0-1) This course is designed for teacher preparation candidates who need extended field experience hours. The course increases awareness of the many facets of teaching through active engagement and participation in a variety of pre-school through grades 12 (PK-12) school settings. One - forty clock hours of extended field experiences are required for this course at Level I experiences defined by the Educational Service Unit at MSU. This course may be repeated. This course is pass/fail.

Prerequisite: Completion of 12 credit hours

EDUC 222 - Computing Tools for Educators (3)

(3-0-3) An introduction to educational computing through lecture and directed hands-on computer activities. The course will focus on the computer as a tool for educators. No previous computer experience required.

EDUC 240 - Educator Preparation Field Experiences II (1)

(1-0-1) This course is designed for teacher preparation candidates who need extended field experience hours. The course increases awareness of the many facets of teaching through active engagement and participation in a variety of pre-school through grades 12 (PK-12) school settings. One - forty clock hours of extended field experiences are required for this course at Levels II and III experiences defined by the Educational Service Unit at MSU. This course is pass/fail and may be repeated if additional field hours are needed.

Prerequisite: EDF 207 and completion of 12 credit hours

EDUC 476 - Content Area Literacy (3)

(2-2-3) *Admission to TEP is required.* Effective practices for addressing the literacy needs of elementary through high school students will be addressed in this course, and will include reading and writing across the content areas, listening, speaking, visual literacy, and other related topics. Field experiences are an integral part of this course.

EDUC 482 - Classroom Management and Assessment (3)

(2-2-3) *Admission to TEP is required.* Designed to provide assistance in establishing an organized, well managed classroom in grades P-9 and to develop an understanding of educational assessment terms and methods. Field experience in P-5 is an integral part of this course and is required.

Prerequisite: EDEM 330 or EDMG 330

Corequisite: EDEE 321 and SCI 490

EEC - Engineering, Electronics, and Computer

EEC 140 - Basic Electricity (3)

(2-2-3) General course on the laws, theories and applications of electricity. Options of electricity, electronics or manufacturing robotics should take EEC 141. Lab required.

Corequisite: EEC 140L

EEC 141 - Fundamentals of Electric Circuits (3)

(2-2-3) This course is an introduction to fundamentals of electricity and electronics, including electronics principles, components, quantities, measurements and design and analysis of DC and AC circuits. This course is designed to build foundational knowledge and skills in the area of electricity and electronics technology. The course begins with basic electricity and electronic theories, devices, components, measuring instruments, and applies gained knowledge to working systems and circuitry. Using a systematic and practical approach, the course covers theory of current circuit and circuit analysis, including mathematical analysis of circuits using Kirchhoff's Law, Thevenin's and Norton's Theorems. Using comprehensive laboratory experiments for each unit of instruction, students will be able to comprehend and apply theories to practical situations.

Prerequisite: MATH 174 or higher

Corequisite: EEC 141L

EEC 144 - Network Fundamentals (3)

(2-2-3) This course will study computer networks including the theory of network operation, selection of hardware and topology design for such applications as Peer-to-Peer, Local Area Networks (LAN) and Wide Area Networks (WAN). The course will also survey current network protocols used for signal transport over networks, packet switching and routing techniques.

Corequisite: EEC 144L

EEC 215 - Basic Control Systems (3)

(2-2-3) Control of AC and DC loads in commercial and industrial applications. Course content will include the selection and application of control devices and control relays, and the design of control circuits using electromechanical devices and programmable controllers.

Prerequisite: EEC 241

Corequisite: EEC 215L

EEC 240 - Residential Wiring (3)

(2-2-3) Designing, planning, estimating and methods of constructing electrical systems for single family dwellings. Based on most recent National Electrical Code. Lab required.

Prerequisite: EEC 141

Corequisite: EEC 240L

EEC 241 - Circuit Analysis (3)

(2-2-3) This course is a rigorous exposition of circuit analysis techniques that will enable the student to analyze any linear circuit, whether driven by DC or AC sources, or more complex waveforms, e.g., pulse or exponential signals. An important objective of the course is to introduce the student to the relationship between the time-domain and frequency-domain representation of signals, through the use of Fourier series and transforms (for periodic signals) and Laplace transforms (for transient or pulsed signals). The ability to move readily between these two representations of circuit (and system) behavior will benefit students in the Systems Integration Engineering program as they move into further study of control, automation, and communications systems. The course also aims to begin the student's journey into circuit design, by introducing the student to more advanced circuit subblocks, such as filters, amplifiers, A-to-D and D-to-A converters, sensor circuits, and magnetically coupled circuits, etc.

Prerequisite: EEC 141 or PHYS 232

Corequisite: EEC 241L

EEC 242 - Principles of Electronic Communications (3)

(2-2-3) This course will study the technical foundations of all electronic communications systems. The students will examine the key concepts in electronic communications, including principles of modulation, the

distinction between analog and digital communications, and basics of transmission path engineering.

Prerequisite: EEC 241

Corequisite: EEC 242L

EEC 243 - Introduction to Programming - MATLAB (3)

(2-2-3) The goal of this course is to introduce the elements and practicalities of MATLAB and its applications. Students will learn design and analysis concepts with MATLAB codes that will exemplify these concepts. This course will meet students' need for modern computing skills as applied to electronics.

Prerequisite: EEC 141 and MATH 174

Corequisite: EEC 243L

EEC 244 - Fiber Optic Theory and Applications (3)

(2-2-3) This course covers the theory of fiber optic transmission media and their application to various communication systems, from long haul, high-capacity voice/data networks, to local area networks (LAN). It will integrate hands-on laboratory experiments with lecture, readings, and problem assignments. Students will learn the principles of light transmission in optical fiber, as well as the design and configuration of communications transmission systems based on fiber optics.

Prerequisite: EEC 242

Corequisite: EEC 244L

EEC 245 - Digital Electronics (3)

(2-2-3) Functional and logical operation of digital circuits, including logic gates, combinational logic, multivibrators, counters and registers.

Prerequisite: EEC 241

Corequisite: EEC 245L

EEC 341 - Solid-State Electronic Devices and Applications (3)

(3-0-3) This course covers the fundamental concepts and operational principles of semiconductor devices and their applications. The course content includes semiconductor materials, carriers in semiconductors, energy bands, Fermi-Dirac distribution, p-n junctions, metal-semiconductor junction, field-effect transistors, bipolar junction transistors, high-speed transistors, solar cells, detectors and sensors as well as their applications, especially in space. The degradation and protection of semiconductor devices in space are introduced. Lab activities are embedded in the course.

Prerequisite: EEC 141 and PHYS 232

EEC 342 - Electronic Devices and Circuits (3)

(2-2-3) Solid state devices and integrated circuits along with their applications. Topics include FETs, operational amplifiers, thyristors and other specialized devices, oscillators, active filters and voltage regulators.

Prerequisite: EEC 242

Corequisite: EEC 342L

EEC 343 - Motors and Generators (3)

(2-2-3) Characteristics, selection and control of AC and DC motors, solenoids and other commercial or industrial loads. Selection and application of control devices and relays. Design of control circuits using relay logic and programmable controllers. Lab required.

Prerequisite: EEC 241

Corequisite: EEC 343L

EEC 344 - Wireless Communications (3)

(2-2-3) The course covers fundamental concepts of wireless communications including analog and digital modulation, radio propagation, antennas, transmitter and receiver circuitry, and cellular telephony and radio.

Prerequisite: EEC 242

Corequisite: EEC 344L

EEC 345 - Microprocessor Electronics (3)

(2-2-3) Components and operation of a microprocessor system, including program counters, address counters, accumulators, arithmetic logic units, instruction decoders, controller-sequencers and registers.

Prerequisite: EEC 245 or CS 170

Corequisite: EEC 345L

EEC 346 - Programmable Logic Controllers (PLC's) (3)

(2-2-3) This course covers the study of Programmable Logic Controllers, including the theory of PLC operation, selection of a PLC for an application, and PLC networking and programming.

Prerequisite: EEC 241

Corequisite: EEC 346L

EEC 355 - Digital and Microprocessor Systems (3)

(2-2-3) Sequential digital logic design technique. Design using Large Scale Integration (LSI) and Very High Speed Integrated Circuit Hardware Description Language (VHDL) Technology. Design techniques for solving problems using state-of-the-art VHDL and microprocessor components.

Prerequisite: EEC 245

Corequisite: EEC 355L

EEC 400 - Digital Signal Processing I (3)

(2-2-3) This course provides an introduction to the exiting world of signal processing. Upon completion the student will be familiar with the fundamentals of DSP methods and applications using the interactive MAT-LAB signal processing tool box. Designed for students who have some basic familiarity with electric signal analysis.

Prerequisite: EEC 344 or SSE 340

Corequisite: EEC 400L

EEC 443 - Industrial Electricity (3)

(2-2-3) Design, theory, and wiring techniques for commercial and industrial applications. Multi-family dwellings, commercial buildings, and hazardous locations are some of the topics covered. Based on the most recent National Electrical Code. Lab required.

Prerequisite: EEC 240 and EEC 241

Corequisite: EEC 443L

EEC 444 - Satellite Communications (3)

(2-2-3) The course covers fundamental concepts of satellite communications including satellite link modulation schemes, error-correction techniques, and spacecraft and ground station hardware and instrumentation. Equates with SSE 444.

Prerequisite: EEC 344 or SSE 442

Corequisite: EEC 444L

EEC 445 - Computer Electronics (3)

(2-2-3) Computer architecture, addressing modes, instruction sequence, memories, IO systems, AD systems, assemblers, interpreters, operating systems and microprocessor interfacing.

Prerequisite: EEC 345

Corequisite: EEC 445L

EEC 450 - Digital Signal Processing II (3)

(2-2-3) This course provides an introduction to advanced topics in digital signal processing - linear estimation and production analysis, signal modeling, lattice filters, special estimation and adaptive filters; signal processing algorithms and techniques used in a broad range of applications.

Corequisite: EEC 450L

EEC 480 - Digital Communication and Networking (3)

(2-2-3) An intensive study of digital electronic communication and networking. The topics include digital modulation, transmission media characteristics, interface standards, network configurations and testing equipment.

Prerequisite: EEC 445

Corequisite: EEC 480L

EMM - Engineering, Mechanical and Manufacturing

EMM 103 - Engineering Drawing (3)

(2-2-3) The study and application of producing two and three dimensional drawings with CAD. Costs, software applications, advantages and disadvantages of a CAD system are also discussed.

Corequisite: EMM 103L

EMM 106 - Thermoplastic Processing (3)

(2-2-3) Introduction to the materials and techniques employed in the processing of thermoplastics.

Corequisite: EMM 106L

EMM 107 - Thermosetting Plastics and Composites (3)

(2-2-3) Study of the various ways thermosetting plastic compounds are processed.

Corequisite: EMM 107L

EMM 170 - Fundamentals of Robotics (3)

(3-0-3) An introduction to the operations and applications of robots. Android and industrial robots; emphasis on the history, development, sociological implications and future trends. A survey class appropriate for any college major.

EMM 186 - Manufacturing Processes I (3)

(2-2-3) Ferrous and nonferrous metals, basic metallurgy and heat treating, sheet metal, basic welding, casting, forging, manufacturing processes and concepts.

Corequisite: EMM 186L

EMM 203 - Computer Aided Design I (3)

(2-2-3) This course provides a broad introduction to 2-D and 3-D computer-aided design and modeling. Students will learn how to use CAD software programs to model individual parts and assemblies, as well as create final working drawings with dimensions and tolerances.

Corequisite: EMM 203L

EMM 215 - Computer Aided Design II (3)

(2-2-3) This course facilitates learning to create 3-D drawings of objects, parts and assemblies through typical CAD and parametric procedures.

Prerequisite: EMM 103

Corequisite: EMM 215L

EMM 270 - Robotic Systems Applications (3)

(2-2-3) Systems engineering for variable sequence, playback, numerical control and intelligent industrial robots. Economic justification, application, safety, maintenance and programming. Laboratory activities will include problem solving assignments with robots.

Corequisite: EMM 270L

EMM 286 - Manufacturing Processes II (3)

(2-2-3) Various metal forming and machining experiences; emphasis on exact tolerances and precise dimensions. Lathe, mill and grinder experiences.

Prerequisite: EMM 186 and MATH 174 or higher

Corequisite: EMM 286L

EMM 301 - Tool and Equipment Design (3)

(2-2-3) The layout and design of tooling, jigs, fixtures, gages and equipment through computer aided design techniques.

Prerequisite: EMM 203 and MATH 174 or higher

Corequisite: EMM 301L

EMM 303 - Mechanics of Materials (3)

(2-2-3) Mechanics of materials is a branch of applied mechanics that deals with the behavior of solid bodies subjected to various types of loading. The aim of this course is to determine stresses, strains and displacements in structures and their components due to the loads acting on them using theoretical knowledge and then augmenting it with laboratory work by use of finite element analysis software. The course will offer a practical approach to the subject of applied mechanics through a wide range of real-world applications and examples. Case studies, homework, discussions, labs and projects are integrated in a cohesive approach to solving strength and mechanics of deformable bodies and materials related problems in line with contemporary technological advances.

Prerequisite: PHYS 201 or PHYS 231

EMM 306 - Plastic Mold Design and Engineering (3)

(2-2-3) Design of products in relationship to the physical characteristics of plastics, molding techniques and mold construction methods.

Prerequisite: EMM 106 or EMM 386

Corequisite: EMM 306L

EMM 307 - Welding Engineering (3)

(2-2-3) Metal inert gas welding techniques adapted to robots and other automated welding systems. Suitable for both welding technology students and other students involved with the robotics engineering technology option.

Prerequisite: ETM 387

Corequisite: EMM 307L

EMM 315 - 3D Design, Modeling and Animation (3)

(2-2-3) Content will include advanced dimensioning techniques, utilization of attributes, parametric modeling, illustration, presentations, animation and programming.

Prerequisite: EMM 215

Corequisite: EMM 315L

EMM 370 - Robotics Interfacing Engineering (3)

(2-2-3) Electronic, digital and mechanical interfacing of robots in industrial manufacturing cells. Topics will include open and closed loop feedback control systems, various sensing devices, tactile sensing, vision systems and voice synthesis.

Prerequisite: EMM 270

Corequisite: EMM 370L

EMM 386 - Computer-Aided Manufacturing (3)

(2-2-3) Advanced tooling theory and numerical controlled and computer numerical controlled machine processes. Application and selection of carbide tooling emphasized in production applications.

Prerequisite: EMM 186 and MATH 174 or higher

Corequisite: EMM 386L

EMM 403 - Mechanism Design and Analysis (3)

(2-2-3) Mathematical and graphic solution of problems involving the principles of machine elements. A study of motion of linkages, velocities

and acceleration of points within a link mechanism; layout methods for designing cams, belts, pulleys, gears and gear trains.

Prerequisite: EMM 303 and MATH 174 or higher

Corequisite: EMM 403L

EMM 415 - Computer Aided Engineering (3)

(3-0-3) The purpose of this course is to extend students' knowledge and skills in the design, modeling, analysis and simulation of spatial problems found in industrial, civil, or architectural environments. Topics include customization and lisp routines, basic finite element analysis, geometric dimensioning and tolerancing, prototype development and interfacing with computer aided manufacturing and advanced development of movies for civil and architectural projects.

EMM 470 - Robotics Applications Engineering (3)

(2-2-3) Engineering design of a specific manufacturing problem and implementation in the laboratory. Emphasis on industrial engineering techniques, end-of-arm tooling, part orientation and control devices for unmanned machine cells. An interdisciplinary approach will be used.

Prerequisite: EMM 370

Corequisite: EMM 470L

EMM 484 - Manufacturing Information Systems (3)

(2-2-3) Advanced tool and machining theory, with emphasis on production machining, and progressive tooling for computerized numerical control applications.

Prerequisite: SE 488

Corequisite: EMM 484L

EMM 486 - Foundry Engineering (2)

(1-2-2) Casting of hot metals with activities in pattern development, sand testing and mold design.

Prerequisite: EMM 386

Corequisite: EMM 486L

ENG - English

ENG 100 - Writing I (3)

(3-0-3) This course is designed to develop students' skills in reading and comprehending introductory college-level texts with critical awareness; writing effective academic prose; and making appropriate use of a modest number of sources in expository writing, leading to an introduction to argument. Students with an ACT English subscore of 17 or below will take the enhanced/corequisite version of this course (ENG 100E), which adds additional instructional support. The enhanced/corequisite course (ENG 100E) meets additional times throughout the week. This course satisfies the Level 1 required core-writing I for general education.

Prerequisite: One of the following: ACT English score of 18 or higher, Accuplacer Next-Generation Writing score of 250 or higher, SAT Writing & Language score of 25 or higher, KYOTE Writing score of 6 or higher, or GED Reasoning through Language Arts score of 165 or higher.

ENG 120 - Approaches to Literature (3)

(3-0-3) Introduction to a variety of literary traditions around the world, including at least three national groups outside Britain and the United States, with emphasis on ways of reading and understanding literary texts and genre distinctions. This course satisfies the Level 2 Knowledge HUM requirement for general education.

Prerequisite: 1. "C" or better in ENG 099, ACT English score of 18, or COMPASS e-Write score of 9 2. "C" or better in EDEL 097, ACT Reading score of 20, or COMPASS Reading score of 85

ENG 200 - Writing II (3)

(3-0-3) This course is designed to develop students' skills in assessing and evaluating texts with an emphasis on articulating written responses from varying perspectives. Building on literacy skills developed in ENG 100 and other general education courses, students read, analyze and evaluate college-level sources from different perspectives. This course satisfies the Level 1 core-writing II requirement for general education.

Prerequisite: ENG 100

ENG 205 - Language: Culture and Mind (3)

(3-0-3) Introduction to the study of human language. Topics include language and culture, language and the mind, meaning and communication, the acquisition of language, and sound and writing systems.

ENG 211 - Introduction to World Literature I (3)

(3-0-3) Comparative study of world literature to 1650 in English or English translation, with an emphasis on various genres. Equates with IST 211. This course satisfies the Level 2 Knowledge HUM requirement for general education.

Prerequisite: "C" or better in ENG 100 and EDEL 097 or ACT English score of 18

ENG 212 - Introduction to World Literature II (3)

(3-0-3) Comparative study of world literature since 1650 in English or English translation, with an emphasis on various genres. Equates with IST 212.

Prerequisite: "C" or better in ENG 100 and EDEL 097 or ACT English score of 18

ENG 280 - Introduction to Teaching English in Middle and Secondary Schools (3)

(3-0-3) This course familiarizes students with national and state standards in the integrated language arts. Emphasis will be on building foundational knowledge to help students understand the standards, including a review of Standard Written English grammar rules and their role in language diversity, a consideration of the role of multiliteracies in grade 5-12 language arts pedagogy, and a curation of representative grade 5-12 instructional activities in teaching literature, writing, and speaking and listening.

ENG 293 - Creative Writing I (3)

(3-0-3) Introduction to creative writing, with an emphasis on production in several genres. All sections will include at least three of the following: fiction, poetry, creative nonfiction and drama.

Prerequisite: ENG 100

ENG 300 - Introduction to the Study of Literature in English (3)

(3-0-3) Study of literary terminology, research, theory, and documentation techniques, for all English majors. Strongly recommended in preparation for any upper-level literature courses.

Prerequisite: ENG 100

ENG 305 - Introduction to Linguistics (3)

(3-0-3) Introduction to the major areas of contemporary linguistics, including phonetics, phonology, morphology and syntax.

ENG 311 - Global English Literature (3)

(3-0-3) Introduction to English literature produced outside of a British or American tradition.

Prerequisite: ENG 100

ENG 315 - Structure of English (3)

(3-0-3) The structures of the English language from the perspective of descriptive and structural linguistics.

Prerequisite: ENG 100

ENG 320 - Women Writers and Feminist Perspectives (3)

(3-0-3) Study of selected women writers, with attention to feminist theory and practice and the development of a feminist literary canon. Equates with GST 320.

Prerequisite: ENG 100

ENG 331 - British Literature to 1789 (3)

(3-0-3) Survey of selected texts representing the historical development of British literature and culture from the Anglo-Saxon period to the late eighteenth century.

Prerequisite: ENG 100

ENG 332 - British Literature since 1789 (3)

(3-0-3) Survey of selected texts representing the historical development of British literature and culture from the late 18th century to the present.

Prerequisite: ENG 100

ENG 341 - American Literature to 1865 (3)

(3-0-3) Survey of selected texts representing the historical development of American literature and culture from its colonial beginnings to 1865.

Prerequisite: ENG 100

ENG 342 - American Literature since 1865 (3)

(3-0-3) Survey of selected texts representing the historical development of American literature and culture from 1865 to present.

Prerequisite: ENG 100

ENG 344 - The Short Story and the Novel (3)

(3-0-3) Study of representative forms of the short story and the novel.

Prerequisite: ENG 100

ENG 348 - African American Literature (3)

(3-0-3) Study of representative writers, texts, movements and themes in African American literature and culture.

Prerequisite: ENG 100

ENG 360 - Appalachian Literature (3)

(3-0-3) Study of representative Appalachian writers, texts, literary movements and themes.

Prerequisite: ENG 100

ENG 365 - Literature of the South (3)

(3-0-3) Study of representative Southern writers, texts, literary movements and themes.

Prerequisite: ENG 100

ENG 370 - Animals in Literature (3)

(3-0-3) The study of the representation of animals in British and American literature, with an emphasis on post-Darwinian perspectives.

ENG 381 - Teaching Literature in Secondary Schools (3)

(3-0-3) This course focuses on preparing secondary English teaching candidates to teach literature in the high school classroom. Field experience required.

Prerequisite: 1. ENG 280 2. 6 hours in 300-level literature courses

ENG 382 - Teaching Writing in Secondary Schools (3)

(3-0-3) A study of composition theory, research, and practice in a context of a student's own writing. Through workshops and classroom demonstrations, students learn to apply sound writing-based instructional techniques in their secondary classrooms. The course focuses on issues related to how older adolescents develop their writing abilities and the classroom practices which facilitate that development. Field experience required.

ENG 389 - Honors Seminar in Literature (3)

(3-0-3) Intensive analytical study of a technique, movement, theme, author, or genre. Restricted to Honors Program students.

Prerequisite: ENG 100

ENG 390 - Professional Writing (3)

(3-0-3) A writing-intensive course which teaches intermediate-level students the formal, rhetorical and mechanical aspects of technical writing to prepare them for writing case reports, memoranda, technical specifications, process descriptions and other work-related documents.

Prerequisite: ENG 200

ENG 391 - Advanced Expository Writing (3)

(3-0-3) Extensive reading and writing of academic prose and long essays based on scholarship.

Prerequisite: ENG 200

ENG 392 - Teaching Writing in Elementary and Middle Schools (3)

(3-0-3) Study of composition theory, research and practice in a context of a student's own writing through workshops and classroom demonstrations.

Prerequisite: ENG 200

ENG 393 - History of the English Language (3)

(3-0-3) The major developments in the evolution of English from an early Germanic dialect to its present form.

Prerequisite: ENG 100

ENG 394 - Language and Society (3)

(3-0-3) Introduction to sociolinguistics. Focus on language variation and issues of language, gender, race, power and education.

Prerequisite: ENG 100

ENG 395 - Poetry Writing (3)

(3-0-3) Instruction in poetry writing: structural principles, use of metaphor, image, detail, voice, rhythm, the line and other concerns of poetics. A writing workshop format with emphasis on poetry in the contemporary idiom.

Prerequisite: ENG 200

ENG 396 - Fiction Writing (3)

(3-0-3) Instruction in fiction writing: plot, conflict, characterization, point of view, atmosphere and other concerns of contemporary fiction. Writing workshop format with emphasis on fiction in the contemporary idiom.

Prerequisite: ENG 200

ENG 397 - Creative Nonfiction Writing (3)

(3-0-3) Instruction in writing creative nonfiction (including memoir, personal essay, autobiography, and general literary nonfiction). Topics include developing themes from subjects, dramatizing life experience, developing a voice and persona, and other concerns of contemporary creative nonfiction. Writing workshop format.

Prerequisite: ENG 200

ENG 398 - Gay and Lesbian Literature (3)

(3-0-3) Study of literature and sexuality, with an emphasis on the formation of a gay and lesbian literary canon. Equates with GST 394.

Prerequisite: ENG 100

ENG 399 - Special Class (3)

(3-0-3) Study of specialized topics variable by semester and intended to enhance regular course offerings.

Prerequisite: ENG 100

ENG 400 - Studies in English for Teachers (3)

(3-0-3) English 400 is designed to meet National Council of Teachers of English and Kentucky Department of Education guidelines to prepare candidates for the clinical semester in the areas of dispositions, content knowledge, pedagogy, curriculum and assessment. Field experience required.

ENG 401 - Semantics (3)

(3-0-3) A linguistic approach to the study of meaning in language.

Prerequisite: ENG 305 or ENG 315

ENG 404 - Advanced Syntax (3)

(3-0-3) Advanced study of the structure of sentences, including current theoretical perspectives.

Prerequisite: ENG 305 or ENG 315

ENG 422 - Studies in American Literature to 1900 (3)

(3-0-3) Study of representative American writers, texts, literary movements, literary forms and themes from the colonial period to 1900.

Prerequisite: ENG 341 or ENG 342

ENG 423 - Studies in American Literature, 1900-1965 (3)

(3-0-3) Study of representative American writers, texts, literary movements, literary forms, and themes, 1900-1965.

Prerequisite: ENG 342

ENG 424 - Studies in Contemporary American Literature (3)

(3-0-3) Study of representative American writers, texts, literary movements, literary forms and themes, 1965 to present.

Prerequisite: ENG 342

ENG 432 - The British Novel (3)

(3-0-3) Study of representative British novels and the development of the genre from its beginnings to the present.

Prerequisite: ENG 331 or ENG 332

ENG 435 - Shakespeare (3)

(3-0-3) Study of Shakespeare's plays and poetry in historical and critical contexts.

Prerequisite: ENG 331 or consent of instructor

ENG 436 - The English Renaissance (3)

(3-0-3) Study of representative British writers, texts, literary forms and themes, 1500 to 1600.

Prerequisite: ENG 331

ENG 441 - Restoration and Eighteenth-Century British Literature (3)

(3-0-3) Study of representative British writers, texts, literary movements, literary forms and themes, 1600 to 1798.

Prerequisite: ENG 331

ENG 442 - Romantic Writers (3)

(3-0-3) Study of representative British writers, texts, literary movements, literary forms and themes, 1789-1832.

Prerequisite: ENG 332

ENG 443 - Victorian Writers (3)

(3-0-3) Study of representative British writers, texts, literary movements, literary forms and themes, 1832-1901.

Prerequisite: ENG 332

ENG 444 - British Literature since 1901 (3)

(3-0-3) Study of representative British writers, texts, literary movements, literary forms and themes, 1901 to the present.

Prerequisite: ENG 332

ENG 453 - Modern Drama (3)

(3-0-3) Study of representative dramas and the development of the genre from the advent of realism to the present.

Prerequisite: ENG 300

ENG 455 - Early Dramatic Literature (3)

(3-0-3) Study of representative dramas and development of the genre from the Greeks to the mid-19th century.

ENG 463 - American Fiction (3)

(3-0-3) Study of representative American fiction from its beginnings to the present.

Prerequisite: ENG 341 or ENG 342

ENG 466 - American Poetry (3)

(3-0-3) Study of representative American poetry from its beginnings to the present.

Prerequisite: ENG 341 or ENG 342

ENG 470 - Film and Literature (3)

(3-0-3) Study of the relationship between literature and film.

Prerequisite: ENG 300 or consent of instructor

ENG 476 - Special Problems (1-3)

(1 to 3 hrs.) This course is an independent study in English for the undergraduate English major. Before registering, the student must present in writing a suggested study and a justification for that study. Each request for the course will be considered on its own merits in relation to the special needs of the student.

ENG 483 - Advanced Poetry Writing (3)

(3-0-3) Advanced instruction in poetry writing: organic and traditional structures; tone and persona; the sentence and the line; the lyric, dramatic, narrative, and meditative stances; and other concerns of poetics. An intensive writing workshop format with emphasis on poetry in the contemporary idiom.

Prerequisite: ENG 293 or ENG 395

ENG 484 - Advanced Fiction Writing (3)

(3-0-3) Advanced instruction in fiction writing: plot, conflict, characterization, point of view, atmosphere, and other concerns of contemporary fiction. An intensive writing workshop format with emphasis on contemporary fiction and the audience and market for literary fiction.

Prerequisite: ENG 293 or ENG 396

ENG 485 - Advanced Nonfiction Writing (3)

(3-0-3) Advanced instruction in creative nonfiction writing. Focus on the diversity of types of creative nonfiction including memoir, personal essay, autobiography, literary memoir, literary nature writing, literary journalism, literary travel writing, literary science writing, literary cultural criticism and other general literary nonfiction. Writing workshop format.

Prerequisite: ENG 293 or ENG 397

ENG 495 - Seminar: Major Writers (3)

(3-0-3) Intensive study of one or more major figures in literature in English.

Prerequisite: ENG 300

ENG 499C - Senior Seminar in English (3)

(3-0-3) Examination, in a seminar setting, of issues and opportunities for English majors.

Prerequisite: 1. ENG 331, ENG 332, ENG 341 and ENG 342 2. 24 hours in ENG

ESL - English as Second Language

ESL 070 - Test of English as a Foreign Language (TOEFL) Preparation (0)

(3-0-0) This course focuses on developing knowledge and test-taking skills in grammar, reading, writing, listening, and speaking to achieve success with the Test of English as Foreign Language (TOEFL). This course is repeatable.

ESL 071 - Intermediate Reading and Writing (0)

(5-0-0) This course is designed to improve upon English language learners' proficiency in reading and writing both social and academic English. The course builds on students' reading and writing skills and strategies for a variety of purposes (i.e. reading across different genres and writing for different purposes) appropriate for an intermediate level of English proficiency. The course is repeatable. Students will be placed in the appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 072 - Advanced Reading and Writing (0)

(5-0-0) This course is designed to enhance international students' integrated skills in academic reading and writing through authentic reading selections and academic writing assignments in a sheltered environment. The course is repeatable. Students will be placed in the appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 074 - Beginning Reading (0)

(5-0-0) This course introduces students to academic reading skills and strategies in a holistic approach through a variety of themes, genres, and sources such as textbooks, newspapers, magazines, and online practice and resources. The course is repeatable. Students will be placed in the appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 075 - Beginning Writing (0)

(5-0-0) This course focuses on developing fundamental writing skills in sentence composition and introduces students to the writing process (pre-writing, first draft, revision, and final draft) through clear explanations, extensive practice, and coverage of sentence mechanics and grammar. The course is repeatable. Students will be placed in the appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 076 - Beginning Integrated Grammar (0)

(5-0-0) This course focuses on building foundational grammar skills in English at the beginning level. Topics include verbs, nouns, pronouns, modals, and introduction to verb tenses. The course is repeatable. Students will be placed in the appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 077 - Intermediate Integrated Grammar (0)

(5-0-0) This course focuses on building intermediate grammar skills in English. Topics may include an overview and review of verb tenses, subject-verb agreement, parts of speech, types of sentences and clauses, use of transitions and conjunctions, and voice. This class integrates grammar methodology and communicative methods. The course is repeatable. Students will be placed in the appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 078 - Advanced Integrated Grammar (0)

(5-0-0) This course focuses on developing international students' advanced grammar skills, including topics that relate to the use of English grammatical structures in post-secondary reading, writing, and communication. The course is repeatable. Students will be placed in the appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 079 - American Culture for International Students I (0)

(5-0-0) This course is designed for international students to gain insight and knowledge into American culture, including diverse American values, assumptions, customs, religious affiliations, politics, and identities using historical, linguistic, and cultural perspectives. Petition required.

ESL 080 - Beginning Listening and Speaking (0)

(5-0-0) This course develops foundational listening and speaking skills with a strong focus on accuracy and fluency in addition to grammatical, lexical, and functional skills. The course is based on task-based listening activities, grammar in context, and learner-centered progress checks. The course is repeatable. Students will be placed in the appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 081 - Intermediate Listening and Speaking (0)

(5-0-0) This course builds on foundational listening and speaking skills with a strong focus on accuracy and fluency in addition to grammatical, lexical, and functional skills. The course is based on task-based listening activities, grammar in context, and learner centered progress checks. This course is designed for English language learners at an intermediate level of English proficiency. The course is repeatable. Students will be placed in the appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 082 - Advanced Listening and Speaking (0)

(5-0-0) This course focuses on advanced level listening and speaking skills with a strong focus on accuracy and fluency in addition to grammatical, lexical, and functional skills. The course is based on task-based listening activities, grammar in context, and learner-centered progress checks. This course is designed for English language learners at an advanced level of English proficiency. The course is repeatable. Students will be placed in the appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 083 - American Culture for International Students II (0)

(5-0-0) This course is designed for international students to gain insight into and knowledge of American culture, using current events as the lens through which to understand the United States and its people. The course will examine national and international news sources, including radio, newspapers, magazines, and Internet.

ESL 089 - Intermediate Listening and Speaking (3)

(3-0-3) This course builds on foundational listening and speaking skills with a strong focus on accuracy and fluency in addition to grammatical, lexical, and functional skills. The course is based on task-based listening activities, grammar in context, and learner-centered progress checks. This course is designed for English language learners at an intermediate level of English proficiency. The course is repeatable. Students will be placed in the

appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 090 - Advanced Listening and Speaking (3)

(3-0-3) This course focuses on advanced level listening and speaking skills with a strong focus on accuracy and fluency in addition to grammatical, lexical, and functional skills. The course is based on task-based listening activities, grammar in context, and learner-centered progress checks. This course is designed for English language learners at an advanced level of English proficiency. The course is repeatable. Students will be placed in the appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 091 - Intermediate Reading and Writing (3)

(3-0-3) This course is designed to improve upon English language learners' proficiency in reading and writing both social and academic English. The course builds on students' reading and writing skills and strategies for a variety of purposes (e.g. reading across different genres and writing for different purposes) appropriate for an intermediate level of English proficiency. The course is repeatable. Students will be placed in the appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 092 - Advanced Reading and Writing (3)

(3-0-3) This course is designed to enhance international students' integrated skills in academic reading and writing through authentic reading selections and academic writing assignments in a sheltered environment. The course is repeatable. Students will be placed in the appropriate level of ESL according to the results of University administered placement examinations. Cost of placement examinations will be the students' responsibility.

ESL 093 - Research Reading and Writing (3)

(3-0-3) This course focuses on developing international students' academic English skills as they pertain to research and other post secondary reading and writing purposes. Petition required.

ESL 098 - American Culture for International Students II (3)

(3-0-3) This course is designed for international students to gain insight into and knowledge of American culture, using current events as the lens through which to understand the United States and its people. The course will examine national and international news sources, including radio, newspapers, magazines, and Internet. Petition required.

ESL 099 - American Culture for International Students I (3)

(3-0-3) This course is designed for international students to gain insight into and knowledge of American culture, including diverse American values, assumptions, customs, religious affiliations, politics, and identities using historical, linguistic, and cultural perspectives.

ESS - Earth Systems Science

ESS 102 - Dangerous Planet (3)

(3-0-3) This course focuses on the natural hazards that exist around the globe and impact humans in loss of life and property in seemingly unpredictable events. Emphasis will be on the cause and effect, patterns, emergency response and mitigation of natural hazards. This course satisfies the Level 2 Knowledge NSC requirement for general education.

ESS 108 - Physical Geology (4)

(3-2-4) Earth materials, structures, and processes for geology majors and others who wish to take upper division ESS classes. Lab provides hands-on experience in rock and mineral identification and the use and interpretation of topographic and geologic maps. This course satisfies the Level 2 Knowledge NSC requirement for general education.

Corequisite: ESS 108L

ESS 112 - Inquiry Earth Systems Science for Teachers (3)

(1-4-3) Preservice teachers will learn the essential science concepts established by NSTA for teachers of grades K-8, and state and national standards for science, which includes topics in areas of geology (rocks, minerals, soils, volcanoes, earthquakes, structure of the earth, hydrogeology, geologic time, etc.), meteorology (sun as the source of energy, temperature, pressure, climate, seasonal weather patterns and weather prediction, etc.) and astronomy (sun-earth-moon system, solar systems, stars, etc.). Students will learn these science concepts through a process of direct observation of physical phenomena, making sense of those observations through inference and reason and in collaboration with fellow students and instructors. Not acceptable for majors or minors in the Earth and space sciences.

ESS 199 - Selected Topics (1-6)

(1 to 6 hrs.)

ESS 201 - Historical Geology (3)

(2-2-3) Introduction to the geologic (rock) record of major physical and biological events in Earth's evolution.

Prerequisite: ESS 106 or ESS 108

Corequisite: ESS 201L

ESS 239 - Cooperative Education (1-8)

(1 to 8 hrs.) Participation in supervised work experience in a professional environment.

ESS 276 - Geologic Field Methods and Ground Truthing (3)

(2-2-3) Basic field office and laboratory techniques and instruments used in geologic studies.

Prerequisite: ESS 201 or consent of instructor

Corequisite: ESS 276L

ESS 299 - Selected Topics (1-6)

(1 to 6 hrs.)

ESS 303 - Planetary Geology (3)

(3-0-3) A study of the processes affecting planetary origins and evolution, with an emphasis on processes uncommon on Earth (impacts, geology of icy bodies, planetary rings, etc.), particularly in the outer regions of the solar system. The processes of planetary exploration and the various methods of data gathering from interplanetary probes will be examined.

Prerequisite: One of the following: 1. ACT Math score of 22 2. MATH 152 or higher

ESS 315 - Sedimentation and Stratigraphy (4)

(2-4-4) Origins and characteristics of sediments, sedimentary structures, depositional environments, facies, systems tracts, sequences and sedimentary basins. Lab provides hands-on experience in sediment analysis and techniques used in reconstructing stratal geometries.

Prerequisite: ESS 201

Corequisite: ESS 315L

ESS 325 - Earth Structure and Tectonics (4)

(2-4-4) Details of Plate Tectonic theory and the forces generated, which deform the Earth's Crust. Geologic structures and geometrical techniques used in descriptive analysis.

Prerequisite: 1. ESS 108 2. MATH 141, MATH 174, or MATH 175

Corequisite: ESS 325L

ESS 330 - Geographic Information Systems (GIS) I (3)

(2-2-3) Introduction to the methods of GIS; students will learn to identify, manipulate, and analyze spatial data using state-of-the art software, and learn to define and address real problems using real data.

Prerequisite: CIS 101

Corequisite: ESS 330L

ESS 331 - Geographic Information Systems (GIS) II (3)

(2-2-3) An investigation into various advanced visualization and modeling procedures that use Geographical Information Systems (GIS) software (ArcGIS).

Prerequisite: ESS 330

Corequisite: ESS 331L

ESS 339 - Cooperative Education (1-8)

(1 to 8 hrs.) Participation in supervised work experience in a professional environment.

Prerequisite: ESS 239 or consent of department chair

ESS 340 - Oceans and Atmospheres (3)

(2-2-3) An introduction to oceanography and atmospheric science, with an emphasis on interrelationships such as energy transfer, circulation patterns and seasons. Human influences and cultural effects on international environmental strategies will be explored.

Prerequisite: ESS 108, CHEM 101, CHEM 111 or PHYS 201

ESS 350 - Geomorphology (3)

(2-2-3) Landforms and geologic processes that shape the Earth's surface. Lab emphasizes use of topographic maps, aerial photographs and remotely sensed images in landform recognition and interpretation.

Prerequisite: ESS 108

Corequisite: ESS 350L

ESS 362 - Mineralogy (4)

(2-4-4) Physical and chemical properties of minerals; chemical, optical and x-ray methods of identification; systematic survey of common mineral groups.

Prerequisite: ESS 108

ESS 363 - Petrology (4)

(2-4-4) Origin, evolution and interpretation of igneous and metamorphic rocks; chemical, optical and x-ray methods of analysis.

Prerequisite: ESS 362

Corequisite: ESS 363L

ESS 376 - Environmental Geology (3)

(2-2-3) Interaction of humans with surface and near-surface geological environments. Applies geological principles and techniques to problems associated with natural and anthropogenic geologic hazards, disposal/treatment of human and industrial wastes, and earth resource management.

Prerequisite: 1. ESS 108 2. MATH 135 or higher

Corequisite: ESS 376L

ESS 379 - Invertebrate Paleontology (4)

(2-4-4) Invertebrate animals, their morphology, classification, paleoecology, phylogeny and stratigraphic succession; faunal assemblages and research techniques.

Prerequisite: ESS 201 or ESS 410

Corequisite: ESS 379L

ESS 380 - Coal Geology (3)

(3-0-3) A cradle-to-grave study of coal systems science. This course will address coal formation, occurrence, exploration for, and both utilization and environmental impacts of utilization in an integrated lecture/discussion/laboratory/field work environment. This course requires attendance on four Saturday field exercises.

Prerequisite: ESS 108 and CHEM 111

ESS 381 - Economic and Energy Geology (4)

(3-2-4) This course will address the geological setting, formation, and occurrence of major metallic and non-metallic mineral/ore, mined rock, and hydrocarbon resources. Post-extractive site remediation will be discussed, as will major environmental impacts.

Prerequisite: ESS 108 and CHEM 111

Corequisite: ESS 381L

ESS 389 - Honors Seminar in Earth Systems Science (3)

(3-0-3) Study and discussion of current topics, issues and problems in various areas of the overall discipline of earth systems. Topics will vary from semester to semester.

Prerequisite: HON 101 and HON 102

ESS 390 - Environmental and Hydrogeology (4)

(2-4-4) Interaction of humans with surface and sub-surface geological environments including disposal/treatment of human and industrial wastes. Applies geological principles and techniques concerning the origin and movement of ground water, aquifers, behavior of pumped wells, general water chemistry and water quality, and ground water contamination.

Prerequisite: ESS 108 and MATH 152

Corequisite: ESS 390L

ESS 399 - Selected Topics (1-6)

(1 to 6 hrs.)

ESS 401 - Remote Sensing (3)

(2-2-3) An exploration of the ways in which remote sensing systems provide geospatial information that is relevant, accurate, accessible, and available in appropriate formats. Emphasis will be placed on the range of information that can be generated from remotely sensed data through GIS applications.

Prerequisite: ESS 330

Corequisite: ESS 401L

ESS 410 - Geological History of Plants and Animals (3)

(2-2-3) Evolutionary history of plants and animals throughout geological time.

Prerequisite: ESS 201

Corequisite: ESS 410L

ESS 413 - Micropaleontology (3)

(2-2-3) Collection, preparation, microscopic investigation, classification, paleocology and stratigraphic succession of microfossils.

Prerequisite: ESS 379 or ESS 410

Corequisite: ESS 413L

ESS 415 - History of Geology (2)

(2-0-2) Development of geological thought; important persons and their contributions to our understanding of Earth.

ESS 425 - Hydrogeology (3)

(2-2-3) Algebra-based course in applied ground water concerning the origin and movement of ground water, aquifers, behavior of pumped wells,

general water chemistry and water quality, and ground water contamination.

Prerequisite: 1. ESS 108 2. ESS 201 or higher 3. MATH 152 or higher

Corequisite: ESS 425L

ESS 430 - Low-Temperature Geochemistry (3)

(2-2-3) Chemical reactions between natural waters, atmospheric gases and earth materials in surface and near-surface environments.

Prerequisite: CHEM 112 and ESS 108

Corequisite: ESS 430L

ESS 439 - Cooperative Education (1-8)

(1 to 8 hrs.) Participation in supervised work experience in a professional environment.

Prerequisite: ESS 339 or consent of department chair

ESS 440 - Biogeochemical Cycles (3)

(2-2-3) The study of cycles as a model for the Earth's climate, its changes, and the integrated nature of the oceans, atmosphere, geology and biology.

Prerequisite: 1. Junior or senior standing. 2. CIS 101 or PHYS 181.

Corequisite: ESS 440L

ESS 450 - Economic Geology (3)

(3-0-3) Formation and occurrence of major metallic and nonmetallic mineral deposits of the world.

Prerequisite: ESS 262

ESS 455 - Geospatial Science Applications (3)

(2-2-3) An advanced course on the design and use of spatial information to support analytical modeling used in urban planning, policy, and environmental analysis. Students will study applications from their own area of interest, developing "what if" scenarios incorporating spatial and non-spatial data.

Prerequisite: ESS 331

Corequisite: ESS 455L

ESS 476 - Special Problems (1-6)

(1 to 6 hrs.) Topic to be approved prior to registration.

ESS 498 - Senior Research (3)

(3-0-3) Guided research for students choosing the Senior Thesis option for the capstone experience.

Prerequisite: Senior Standing

ESS 499 - Selected Topics (1-6)

(1 to 6 hrs.)

ESS 499A - Geology Licensure Preparation (3)

(3-0-3) This course is a review of the principal content of the entire geology program. It is intended to prepare students for the initial exam for licensure as a Professional Geologist.

Prerequisite: Senior Standing

ESS 499C - Earth System Science Senior Thesis (3)

(3-0-3) A directed research project will be designed, data will be collected and analyzed, in consultation with an advisor. A primary literature search and research proposal will be completed using library facilities and current technology. This research project will culminate with a scientific paper and oral presentation.

ESS 499D - C & I Action Research in ESS (3)

(3-0-3) A culminating experience in which students will use curriculum and instruction action research in the earth and space sciences to develop, teach and reflect upon a standards-based unit plan.

Corequisite: EDSE 416

ETM - Engineering and Technology Management

ETM 100 - World of Technology (3)

(3-0-3) An introduction to basic concepts of industry. The identification of the major industries and the development of an understanding of their impact upon society.

ETM 101 - Social Dimensions of Technology (3)

(3-0-3) The global community is being changed by technology at a rapid pace. As a result, thoughtful and meaningful considerations are necessary so that the use of technology reflects the shared needs and values of society. An understanding of how technology relates to society and how society relates to technology is vital if we want improvements in how we utilize our resources for society's future prosperity. The course will provide historical and current examples and information, as well as future dimensions of technology's impact on society. This course requires no specialized knowledge, but critical thinking skills will be emphasized, since students will be challenged to think about the implications of technology's impact on society today and also expectations for the future. The mode of delivery will be a mix of lectures by the instructor, discussion, case studies and group projects. There will also be guest speakers. Topics to be covered will include; history of technology, ethics and technology, energy and technology, health and technology, and future impacts of technology.

ETM 104 - Human Factors at Work (3)

(3-0-3) An introduction to the relationship between human physiology and pathology at work in industrial environments. Students will gain a basic understanding of human body mechanics, causes of injury at workplaces, ergonomic designs of workstations and physical environments, and the consequences in human life. This course satisfies the Level 2 Knowledge NSC requirement for general education.

ETM 110 - Fundamentals of Computer Technology (3)

(3-0-3) A general introduction to the computer systems. Basic hardware concepts are covered. Main topics include an overview of components of a computer, the components of system unit, operating systems and utility programs, communications and networks, the internet and world wide web, web development programs, e-commerce and system maintenance. Designed for students who have some basic familiarity with Microsoft Office application.

ETM 111 - Basic Wood Technics (3)

(2-2-3) This is the beginning course in wood technology, consisting of theory and application with particular emphasis on individual and industrial values of secondary wood processing.

Corequisite: ETM 111L

ETM 120 - Fundamentals of Engineering (3)

(3-0-3) This course is an introduction to the broad perspective of the science, engineering and technology world. It focuses on understanding fundamental concepts and skills of engineering and technology. Students will learn the importance of the application of critical thinking and problem solving skills in pursuing an engineering and technology related career. A series of seminars and lectures presents students an overall picture of the modern technology world and explains techniques and safety issues.

ETM 123 - Concepts and Experiences in Energy (3)

(3-0-3) An interdisciplinary approach to the study of energy. Incorporates experiences and concepts from motion, heat, light, magnetism, electricity, radioactivity and sound waves. Equates with PHYS 123, SCI 123 and SSE

123. This course satisfies the Level 2 Knowledge NSC requirement for general education.

ETM 160 - Introduction to Power and Fluid Mechanics (3)

(2-2-3) Beginning instruction in energy sources and fluid systems. Steam engines, steam turbines, diesel engines, spark-ignition engines and exhaust emissions are studied.

Corequisite: ETM 160L

ETM 200 - Technology and Society (3)

(3-0-3) This course is designed to introduce students to the realm of technology and to increase their awareness of both the uncertainty and promise that arises when technology becomes a creative human enterprise. The course is intended to facilitate the integration of existing student views into a coherent and realistic perspective of a technological society. In addition to the innovations in technology, consideration will be given to the nature of technology and science, evolution of technology, philosophical views of technology, technology ethics, contemporary technological issues and concerns, technology risk assessment and the future outlook for science and technology. Several course activities focus on the roles individuals can play in the management and control of technological forces toward social progress.

ETM 201 - Technology and Life Sciences (3)

(3-0-3) This course is for a broad audience covering a historical overview and future prospects of the role of technology in various life sciences areas including biology, medicine, and clinical sciences. The course will present the array of technological applications in life sciences including assistive technologies, imaging technologies, biomechatronics, industrial biotechnology, telemedicine, etc. Emerging technologies in life sciences have ethical ramifications and the course will examine issues and ethics concerning the future use of these technologies. Environmental and economic aspects of life sciences technologies will also be explored. This course satisfies the Level 2 Knowledge NSC requirement for general education.

ETM 211 - Advanced Wood Technics (3)

(2-2-3) This is a continuation of ETM 111. It consists of advanced techniques and practices reflecting the wood industries through the study and use of theory, experimentation and evaluation.

Prerequisite: ETM 111

Corequisite: ETM 211L

ETM 222 - General Crafts (2)

(2-2-3) A survey of several craft media, involving a study of the common tools, skills, processes, and procedures in clay, glass, plastics, metal, stone, leather and wood. Industrial applications of craft principles and processes will also be investigated.

Corequisite: ETM 222L

ETM 223 - Innovate: Introduction to Creativity and Design (3)

(3-0-3) Innovation theory and practice through creativity and design. Special emphasis on "human centered design" through the process of inspiration, ideation, and implementation. Equates with ART 223.

ETM 260 - Thermal and Fluid Systems (3)

(2-2-3) Introductory course in the design and analysis of power transfer devices utilizing hydraulics and pneumatics, with emphasis on robotics applications.

ETM 261 - Power Mechanics (3)

(2-2-3) Control mechanisms are studied along with rocket engines, various forms of jet engines and advanced power systems.

ETM 263 - Technology Management I (6)

(6-0-6) Technical competencies in the field of specialization. Offered only for technology management students.

ETM 264 - Technology Management II (6)

(6-0-6) Practical specialized technical skills in the related fields. Offered only for technology management students.

ETM 265 - Technology Management III (6)

(6-0-6) Attainment of advanced technical skills. Offered only for technology management students.

ETM 300 - Technology and Society (3)

(3-0-3) A study of the issues that arise as technology becomes a creative human enterprise. Students will be engaged in reading, dialog and group activities in order to increase their abilities to identify and assess the implications and ramifications of productively living in a technological society.

ETM 307 - Materials Science (3)

(2-2-3) An organized investigation of engineering materials, including their classification, properties and means of testing to determine their properties. The application of materials to manufactured and constructed products and the effects of manufacturing processes and in-service stress on materials will be considered.

Prerequisite: PHYS 201/201A or PHYS 231/231A

Corequisite: ETM 307L

ETM 310 - Engineering Economic Analysis (3)

(3-0-3) Engineering investment, decision analysis of alternate projects, machine depreciation methods, machine replacement policies, effect of taxes and inflation on engineering investment.

Prerequisite: MATH 152, MATH 174, or MATH 175

ETM 311 - Design and Construction (3)

(1-4-3) Students design, plan, construct and finish an appropriate product requiring knowledge of advanced principles and techniques in wood technology.

Prerequisite: ETM 211

Corequisite: ETM 311L

ETM 317 - Systems Modeling and Simulation (3)

(3-0-3) This course is designed to study both discrete/continuous and deterministic/stochastic processes in order to demonstrate and apply core engineering principles and concepts to solve engineering problems. These include formulating and implementing simulation models, analysis of input and output data, statistical techniques for models of single systems and competing alternative systems. Computer simulation languages will be introduced.

Prerequisite: ETM 120 and MATH 175 or MATH 275 or MATH 353 or MATH 365

ETM 319 - Quality and Reliability Engineering (3)

(3-0-3) Designed to provide analytical and statistical inference techniques for process and product control. Students will learn how to perform quality control using mathematical tools with a focus on statistical methods. Two major areas of statistical quality control, on which students will extensively work on, are reliability engineering and statistical process control (SPC) using control charts. Furthermore, students will understand the mission of a quality improvement system as part of quality and reliability engineering.

Prerequisite: MATH 175, MATH 275, MATH 353, or MATH 365

ETM 320 - Project Management (3)

(3-0-3) A study of industrial project management methods for the analysis and design of industrial-level projects. Content includes planning, scheduling and control of project resources from an industrial perspective. Concepts and activities are integrated according to the Project Management Institute's Body of Knowledge.

Prerequisite: ETM 120

ETM 327 - Organizational Management for Engineers (3)

(3-0-3) A study of basic industrial management practices and procedures. Designed to serve the technician, first-line supervisor, or lay management individual to provide an awareness rather than to prepare a practitioner of management.

ETM 330 - Engineering Design (3)

(2-2-3) This course covers product design with emphasis on consumer demands. The key principles, elements and precepts of modern design are discussed with emphasis on the design methodology in both individual and collaborative settings. This course will extend students' knowledge in designing components for manufacturability, in a concurrent mode of engineering.

Prerequisite: Junior or senior standing, Completion of ETM 100-level core requirements, and MATH 152 or higher

Corequisite: ETM 330L

ETM 339 - Cooperative Education I (1-3)

(1 to 3 hrs.) Designed to develop professional and technical work experience in a business, educational and/or industrial organization.

ETM 352 - Energy Systems (3)

(3-0-3) This course focuses on current and future sustainable energy needs of society. Students will be given the opportunity to analyze, design, and perform design calculations for sustainable energy systems, including solar, wind, and geothermal systems, as well as energy efficient buildings. Students will also relate the relevance of these activities to practical solutions in green technologies. Topics to be covered include: introduction to energy sustainability, solar collectors, solar thermal applications, photovoltaic devices and systems, hydrogen fuel cell technology, wind energy, geothermal systems, green buildings, net metering and electricity network, installation, solar site analysis and mounting, testing and maintenance.

Prerequisite: ETM 120

ETM 361 - Automotive Mechanics (3)

(2-2-3) Engine repair and maintenance procedures including computerized management systems. Braking systems, drive systems and steering systems are also covered.

Corequisite: ETM 361L

ETM 362 - Fluid Power (3)

(2-2-3) To gain an in-depth knowledge of fluid systems as they are used in modern industry.

Corequisite: ETM 362L

ETM 365 - Instrumentation (3)

(2-2-3) Techniques of properly instrumenting test calls with such devices as pilot tubes, manometers and electronic devices.

Corequisite: ETM 365L

ETM 371 - Seminar (1)

(1-0-1) Participants will develop a further understanding of the underlying concepts of industrial career options by participation in one or more programs followed by informal discussion.

ETM 385 - Staff Exchange (1-3)

(3-0-3) Designed to give an opportunity for an individual to upgrade his/her specific technical skill in an ever changing technical world. Through this unique chance to work in industry learning the new techniques, developing new skills and expanding one's knowledge will enable the participant to take back to his/her classroom the latest innovations in technology as industry has adopted for their use.

ETM 387 - Fundamentals of Metallurgy and Joining Technology (3)

(2-2-3) Pressure, non-pressure and brazing processes for material fabrication. Arc, oxyacetylene, inert gas and special welding techniques. Coupon analysis required for destructive and nondestructive testing.

Corequisite: ETM 387L

ETM 398 - Supervised Work Experience (1-3)

(1 to 3 hrs.) An enrichment program which will give experience in an occupational area which is not possible to provide in a classroom setting. Student will work under supervision in an approved organization for a period of time specified by his or her major department. Credit will be commensurate with the amount of time worked. The student will be supervised by faculty from the major department. A representative of the cooperating organization will be directly responsible for the work experience of the student and will make a written evaluation of the student periodically.

ETM 399 - Special Class (1-3)

(1 to 3 hrs.) Technology and industrial teacher education topics reflective of emerging industrial techniques or trends in technical-vocational education. Innovative, experimental and hands-on techniques will frequently be used.

ETM 411 - Wood Technics (3)

(2-2-3) A study of the problems and process of the major wood industries in the United States. Various industrial processes, application and testing are utilized in mass production and individual projects.

Corequisite: ETM 411L

ETM 419 - Quality Management Systems (3)

(3-0-3) A study of total quality concepts and their impact on the quality and competitiveness of products.

Prerequisite: ETM 319

ETM 421 - Design of Experiments (3)

(3-0-3) The course introduces concepts, principles and techniques used in designing, conducting, and analyzing experiments for industrial applications and applied research. Emphasis is given to product and process design, process improvement and quality engineering. Topics include simple comparative experiments, ANOVA, randomized block and Latin squares, factorial design, blocking and confounding factors, fitting regression models and response surface.

Prerequisite: ETM 319

ETM 422 - Industrial Safety Standards and Enforcement (3)

(3-0-3) A study of industrial safety codes, standards, regulations and enforcement procedures. Explanations of worker safety as related to attitude and production. Review of current laws regulating safety and those agencies related to enforcement and training.

ETM 430 - Operations and Facilities Management (3)

(3-0-3) The study of concepts, principles and techniques used in planning, designing and analyzing industrial facilities with emphasis on manufacturing and services.

Prerequisite: ETM 320

ETM 439 - Cooperative Education II (1-6)

(1 to 6 hrs.) Designed to develop professional and technical work in a business, educational and/or industrial organization.

ETM 460 - Internal Combustion Engines II (3)

(2-2-3) Detailed study of exhaust emissions and the gas turbine engine.

Corequisite: ETM 460L

ETM 463 - Heating, Ventilating and Air Conditioning (3)

(2-2-3) A study of the ventilating and heating techniques in modern industrial application. Also includes industrial air conditioning and refrigeration.

Corequisite: ETM 463L

ETM 476 - Special Problems (1-3)

(1 to 3 hrs.) Designed for the purpose of permitting a student to do advanced work as a continuation of an earlier experience or to work in an area of special interest.

ETM 499C - Senior Capstone Design Thesis (3)

(3-0-3) The student will design and develop a product or a system using the scientific method of inquiry in conjunction with a faculty member who has expertise in the chosen design project. The design project should address end-user needs (problem), design objectives and constraints, and metrics for success. The design project should include the statement of the problem, background of the problem, parameters of the problem, methods and procedures for problem solution. Course enrollment is limited to graduating senior students in the final semester.

Prerequisite: ETM 307, ETM 319, and ETM 330

FIN - Finance

FIN 160 - Money: A Cultural Exchange (3)

(3-0-3) This course will enable students to analyze the influence of money on individuals and societies. This will be accomplished through an examination of culture, social, economic, geographic and historical differences existing in monetary use, acceptance, value and impact on standard of living. As a result students will witness the ever changing role of money in a society and how that unique dynamic can influence individuals and groups around the world. This course will be relevant to undergraduates majoring in any field, while at the same time exposing them to a critical perspective that is particular to the social sciences.

FIN 199 - Selected Workshop Topics (1-4)

(1 to 4 hrs.) Workshops on various finance subjects will be presented periodically to supplement the basic course offerings in finance. Credit toward degree programs must be approved by the student's advisor and the associate dean.

FIN 252 - Mathematics of Finance (3)

(3-0-3) Application of mathematical techniques for business and economic analysis. Topics covered include: interest annuities, amortization, sinking funds, bond valuation and other relevant quantitative subjects.

FIN 264 - Personal Finance (3)

(3-0-3) Planning personal finance, financial statements, budgeting, managing financial and non-financial assets, taxes, insurance and estate planning. This course satisfies the Level 2 Knowledge SBS requirement for general education.

FIN 325 - Bank Management (3)

(3-0-3) Organization and operation of the commercial bank.

Prerequisite: 1. ACCT 281 2. ECON 101 or higher

FIN 339 - Cooperative Education III (1-8)

(1 to 8 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a junior level status. Maximum of three hours of cooperative education credit (FIN 339/439) available for option credit.

Prerequisite: Consent of school cooperative education coordinator

FIN 342 - Money and Banking (3)

(3-0-3); Origin, development, and functions of money; banking functions and processes; the Federal Reserve System and monetary policy. Equates with ECON 342.

Prerequisite: ECON 101 or higher

FIN 360 - Business Finance (3)

(3-0-3) Financial management, management of cash, receivables, inventories, plant assets, short-term debt, long-term debt, intermediate-term debt and owner's equity.

Prerequisite: 1. ACCT 281, ACCT 282, ECON 201 and 2. MATH 152, MATH 174, or MATH 175

FIN 365 - Financial Issues for Small Business (3)

(3-0-3) Examines the financial issues small businesses deal with at start-up and on a day-to-day basis. Students will learn how small businesses can apply financial principles to benefit the company. Equates with MNGT 365.

Prerequisite: FIN 360

FIN 370 - Working Capital Management (3)

(3-0-3) Focus on short-term financial management decision-making covering topics which include: accounts receivable management, inventory management and control, cash management, accounts payable management, liquidity analysis, and short-term investing and financial alternatives. Short-term financial management decisions facing small businesses are emphasized.

Prerequisite: FIN 360

FIN 372 - Retirement Planning and Employee Benefits (3)

(3-0-3) Covers retirement planning issues such as types of retirement plans, distribution options, retirement needs analysis, suitability of an investment portfolio for a qualified plan, Social Security, Medicare and Medicaid; and employee benefit issues such as life, medical and disability insurance.

Prerequisite: FIN 360

FIN 373 - Investments (3)

(3-0-3) Investment risks, security analysis, investment policy-making, both individual and institutional.

Prerequisite: ECON 202 and FIN 360

FIN 374 - Estate Planning and Taxation (3)

(3-0-3) Covers estate planning and taxation issues such as documentation, legal ownership to property, trusts, the federal gift tax, probate and asset valuation.

Prerequisite: FIN 360

FIN 375 - Accounting Analysis and Financial Decision Making (3)

(3-0-3) Interpretation and development of accounting and financial data and statements incorporating spreadsheet analysis and applications. Equates with ACCT 375.

Prerequisite: FIN 360

FIN 376 - Risk Manage and Insurance (3)

(3-0-3) Covers insurance topics such as legal aspects, life and health, and property and liability, and business risk management.

Prerequisite: FIN 360

FIN 399 - Selected Workshop Topics (1-4)

(1 to 4 hrs.) Workshops on various finance subjects will be presented periodically to supplement the basic course offerings in finance. Credit toward degree programs must be approved by the student's advisor and the associate dean.

FIN 420 - Financial Markets and Institutions (3)

(3-0-3) Analysis of the flow of funds in financial markets; characteristics of money and capital markets; characteristics of financial instruments; interest rate determination; purposes and characteristics of financial institutions; interactions of financial markets and financial institutions domestically and internationally.

Prerequisite: FIN 360

FIN 439 - Cooperative Education IV (1-8)

(1 to 8 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a senior-level status. Maximum of three hours of cooperative education credit (FIN 339/439) available for option credit.

Prerequisite: Consent of the school cooperative education coordinator

FIN 460 - Advanced Business Finance (3)

(3-0-3) Includes intensive study of capital budgeting, cost of capital, capital structure and special topics in finance.

Prerequisite: FIN 360

FIN 472 - Portfolio Analysis (3)

(3-0-3) Includes study of portfolio theory, risk analysis, portfolio management. Applications including computer analysis of financial data stressed.

Prerequisite: FIN 360 and FIN 373

FIN 476 - Special Problems in Finance (1-3)

(1 to 3 hrs.) This course is an independent study of finance problems of special interest. Students must present in writing a suggested problem and justification for the study prior to registration. Each request will be considered on its own merit in relation to the special needs of the student.

Prerequisite: 21 hours in economics and finance and prior consent of the associate dean

FIN 484 - Healthcare Financial Management (3)

(3-0-3) This course helps students develop financial management skills applicable to healthcare organizations, especially hospitals. The course begins with the introduction of the U.S. healthcare delivery system and the financial relationships among various healthcare organizations. Upon understanding of the healthcare delivery system, the course proceeds with important aspects of financial management, such as financial strength analysis, capital cycle, capital financing and structure, and capital budgeting and allocation. Specifically, these aspects will be examined under the circumstance of hospital financial management. Through case studies, in-class discussions and presentations, students will learn to apply financial management practices in healthcare organizations and be aware of financial challenges in the dynamic healthcare industry.

Prerequisite: FIN 360

FIN 485 - International Finance (3)

(3-0-3) Includes the study of international finance markets, investments and multinational corporations with emphasis on the operations of the multinational firm, foreign exchange and trade, banking and investment, and risk.

Prerequisite: FIN 360

FIN 486 - Student-Managed Investment Fund (3)

(3-0-3) Students manage a real portfolio of investments in the stock market. Investment money belongs to the MSU Foundation Inc., and other outside investors. Students conduct securities analysis and make portfolio management decisions. All investment decisions are made by the students. The course instructor serves as a moderator only.

Prerequisite: FIN 360 and FIN 373

FIN 490 - Seminar in Financial Theory and Practice (3)

(3-0-3) Examination and application of contemporary financial theory and analysis. Study of classical literature and the evolution of contemporary financial theory. Examination of the role of events and institutions on the evolution of financial thought.

Prerequisite: FIN 373 and FIN 460

FIN 499 - Selected Workshop Topics (1-4)

(1 to 4 hrs.) Workshops on various finance subjects will be presented periodically to supplement the basic course offerings in finance. Credit toward degree programs must be approved by the student's advisor and the associate dean.

FLM - Film Studies

FLM 170 - Introduction to Film (3)

(3-0-3) Introduction to Film is a general education course designed to introduce students to the study of film as an art form. In particular, it will give students the historical background and critical vocabulary needed to analyze film aesthetically. This course satisfies the Level 2 Knowledge HUM requirement for general education.

FLM 270 - Film History (3)

(3-0-3) A survey of major technological, generic, economic, social, cultural and historical developments, influential figures, and landmark films in the evolution of world cinema as an art form, an entertainment medium, and an industry from the late 19th century to the present.

Prerequisite: FLM 170

FLM 399 - Special Topics (3)

(3-0-3) Special courses that supplement regular course offerings in the film studies minor. May be repeated if the subtitle indicates that a different topic is being covered.

Prerequisite: FLM 170

FLM 470 - Film Theory (3)

(3-0-3) A survey of influential film theories.

Prerequisite: FLM 170

FNA - Fine Arts

FNA 187 - Opera Workshop (1)

(0-2-1) An introduction to the techniques of musical theatre with emphasis placed on the integration of music and action-dramatic study of operatic roles.

FRN - French

FRN 101 - Beginning French I (3)

(3-0-3) Emphasis on developing communicative skills: listening, speaking, reading and writing. Basic grammar and orientation to French culture. Video and audio components. Computer enhanced instruction. Online workbook and resources. This course satisfies the Level 3 Global Cultures HUM requirement for general education.

FRN 102 - Beginning French II (3)

(3-0-3) Continuation of FRN 101. Use of four skills for effective communication in a variety of situations.

Prerequisite: FRN 101

FRN 201 - Intermediate French (3)

(3-0-3) Continuation of FRN 102. Increased emphasis on interactive language and grammatical competency.

Prerequisite: FRN 102

FRN 202 - Conversation and Composition (3)

(3-0-3) Continuation of FRN 201. Listening and reading for proficiency. Creative personal expression in speaking and writing.

Prerequisite: FRN 201

FRN 203 - Introduction to France (3)

(3-0-3) Continuation of FRN 202. Implementation of four skills into broad-based dialogue and discussion relating to all aspects of French culture and civilization.

Prerequisite: FRN 102

FRN 205 - French Culture and Civilization (3)

(3-0-3) Survey of art, architecture, music and history of France. Cuisine, fashion and cinema. The imprint of France on America and the Third World. Taught in English; some knowledge of French helpful but not required. Equates with IST 205.

FRN 206 - Business French (3)

(3-0-3) Introduction to the French-speaking business world. Special attention to etiquette, interpersonal relations, and daily culture. Investigation of current French practices in marketing, banking, real estate, advertising and the media. Study of authentic documents and regalia. Comparison of French and American systems of job training and placement. Course taught in English, some knowledge of French helpful. Equates with IST 206.

Prerequisite: FRN 102

FRN 301 - Advanced Grammar and Composition (3)

(3-0-3) This course will focus primarily on the skills of oral and written communication. Students will speak and write on a variety of topics in the target language, and will engage in reading, vocabulary building, and written and oral reinforcement activities.

Prerequisite: FRN 202

FRN 302 - Advanced Phonetics and Conversation (3)

(3-0-3) In-depth analysis of phonology and articulation. Speaking practice in a variety of styles, emphasizing corrective pronunciation and fluency. May be taken two times for credit.

Prerequisite: FRN 202

FRN 303 - Survey of French Literature I (3)

(3-0-3) A survey of major works and authors in French literature up to 1750, including the following periods: Medieval, Renaissance, Baroque, Classicism and Enlightenment.

Prerequisite: FRN 202

FRN 304 - Survey of French Literature II (3)

(3-0-3) A survey of major authors from the French Revolution to the present, including the following movements: Pre-Romanticism, Romanticism, Realism, Symbolism, Modernism, Surrealism, Existentialism, Absurdism and Post Modernism.

Prerequisite: FRN 202

FRN 399 - Special Class (1-3)

(1 to 3 hrs.) Study of specialized topics variable by semester and intended to enhance regular course offerings.

FRN 402 - Advanced French Conversation (1)

(1-0-1) Analysis and imitation of native speech patterns. Practice in aural/oral communication for a variety of situations. May be taken three times for credit.

Prerequisite: FRN 301

FRN 403 - Seminar in French Literature I (3)

(3-0-3) A seminar on an author, genre, or period in Medieval or Early Modern French literature (up to 1750). May be taken three times for credit.

Prerequisite: FRN 303 or FRN 304

FRN 404 - Seminar in French Literature II (3)

(3-0-3) A seminar on an author, genre, or period in modern French literature (after 1750) such as film. May be taken three times for credit.

Prerequisite: FRN 303 or FRN 304

FRN 476 - Special Problems (1-3)

(1 to 3 hrs.) This course is a directed study in French for undergraduate French majors. Each request for the course will be considered on its own merits in relation to the special need of the student. May be taken three times for credit.

FRN 499C - Senior Colloquium in French (3)

(3-0-3) An integrative capstone course in French.

Prerequisite: 1. FRN 403 or FRN 404 2. 18 hours in FRN

FYS - First Year Seminar

FYS 101 - First Year Seminar (3)

(3-0-3) A seminar that orients first year students to Morehead State University emphasizing strategies to achieve the academic, social, personal, financial, emotional and physical well-being that leads to college-level success and completion. This course fosters a sense of belonging and purpose in college work, promotes engagement in the curricular and co-curricular life of the university, articulates the expectations of the University and its faculty, and helps students develop and apply skills for college-level reading, critical thinking, and financial literacy. Students who do not meet the minimum reading ACT score of 19 will take the enhanced/corequisite version of this course (FYS 101E), which adds additional instructional support. The enhanced/corequisite course (FYS 101E) meets five hours per week. This course satisfies the Level 1 core requirement for general education.

Prerequisite: One of the following: 1. ACT Reading score of 20 or higher 2. SAT Reading score of 24 or higher 3. KYOTE Reading score of 20 or higher 4. Accuplacer Reading score 250 or higher 5. GED College Readiness Language Arts score of 165 or higher

GEO - Geography

GEO 100 - The Human World (3)

(3-0-3) Human geography studies patterns and processes that have shaped human understanding, use and alteration of Earth's surface. This course employs spatial concepts and landscape analysis to examine human social organization and its environmental consequences, with some emphasis on the methods and tools used by geographers.

GEO 102 - Dangerous Planet (3)

(3-0-3) This course focuses on the natural hazards that exist around the globe and impact humans in loss of life and property in seemingly

unpredictable events. Emphasis will be on the cause and effect, patterns, emergency response and mitigation of natural hazards. Equates with ESS 102. This course satisfies the NSC II requirement for general education.

GEO 103 - Physical Geography (3)

(3-0-3) Physical elements of the earth and their distribution; weather, climate, landforms, earth materials, water resources and natural vegetation analyzed and interpreted as elements of human habitation; correlated field trips and laboratory studies. This course satisfies the Level 2 Knowledge NSC requirement for general education.

GEO 201 - Map Interpretation and Analysis (3)

(2-1-3) An introduction to the basic concepts of spatial analysis and applications of analytical techniques to geographically referenced information. Discussion will center on types of spatial data, data collection, presentation and basic techniques for analyzing and mapping spatial distributions.

GEO 211 - Economic Geography (3)

(3-0-3) World commodities and their regional distribution. Analysis of land uses, agriculture, manufacturing and extractive industries against a background of natural cultural environments; consideration of economic factors in current international affairs.

GEO 241 - United States and Canada (3)

(3-0-3) Major land-use regions of the United States and Canada, their physical and cultural landscapes.

GEO 245 - Natural Landscapes of Appalachia (3)

(3-0-3) Description and interpretation of the Appalachian mountain region in the context of the physical and ecological processes involved in shaping the terrain and forest biomes, including transformations that have taken place since European settlement as a result of human activity.

GEO 300 - World Geography (3)

(3-0-3) A general survey of the human and physical geography of the major regions of the world with a concentration on development. Emphasis is on the interaction between individuals and the physical and cultural landscape in various settings. Equates with IST 300.

GEO 305 - Cultural Geography (3)

(3-0-3) Analysis of the role of culture in the formation of landscape patterns. This includes an introduction to geographical approaches to landscape evolution, diffusion processes, identity, nature, culture regions and environmental perception.

GEO 306 - Geography of World Population (3)

(3-0-3) This course will familiarize students with the geographic distribution, growth dynamics and migration processes of human populations. Students will gain insight into the causes and outcomes of population growth and decline through examination of population theories and selected case studies.

GEO 310 - Australia (3)

(3-0-3) Resources of Australia, New Zealand and islands of the Pacific; significance of position and political connection of these lands. Equates with IST 310.

GEO 311 - Geography Global Economy (3)

(3-0-3) Spatial analysis of higher level economic activities. Focus is on wholesaling, interregional and international trade and transportation, producer services and investment. Equates with IST 311.

GEO 315 - Urban Geography (3)

(3-0-3) A survey of urban evolution, urbanization, economic structure, land use and urban planning.

GEO 316 - Dynamic Landscapes and Land Use (3)

(3-0-3) Geographic perspectives on the ways in which humans employ the land and its resources. Consideration is given to human and physical systems that influence land cover and land use change.

GEO 320 - Latin America (3)

(3-0-3) The geographic study of Mexico, the Central American Republics, the islands of the Caribbean and South America.

GEO 326 - Cuba and The Caribbean (3)

(3-0-3) The people and places of the Caribbean basin with a concentration on climate, culture, economics and tourism. A special focus will address the dynamics of Cuban socioeconomic development. Equates with IST 326.

GEO 328 - Africa (3)

(3-0-3) Resources, both natural and cultural; changing political conditions and affiliations of African countries, recognition of, and reasons for, the growing importance of this continent in world affairs. Geographic factors in the economic, social and political structure of Europe; emphasis on natural regions, resource distribution and industrial development. Equates with IST 328.

GEO 331 - Europe (3)

(3-0-3) A study of the cultural and physical regions of Europe including the socioeconomic and political structure of the European Union.

GEO 341 - Appalachia (3)

(3-0-3) A geographic analysis of the various physical and human elements of the Appalachian Highlands. Emphasis is placed on the relationship of the physical environment to human activities in the region.

GEO 344 - Kentucky (3)

(3-0-3) Physiographic divisions and subdivisions; interpretations of natural features; occupations and land use; a survey of political units and consideration of traditions and potentialities.

GEO 345 - Global Environmental Sustainability (3)

(3-0-3) The study of environmental concepts, issues and dynamics from a spatial and geographic perspective. Equates with IST 346.

GEO 349 - GIS 1 (3)

(2-2-3) Introduction to GIS and geospatial technologies. This course provides practical training for creating, manipulating, analyzing, and displaying spatial data using geospatial information systems and cartographic principles. Students apply these multidisciplinary techniques to real-world problems in a variety of fields.

Corequisite: GEO 349L

GEO 351 - GIS 2 (3)

(2-2-3) Practical application of GIS and geospatial technologies to advanced visualization and modeling procedures. This course provides practical training in the application of spatial data collection/creation, manipulation, analysis, and display techniques using geospatial information systems to complex problems.

Prerequisite: GEO 349 or ESS 330

Corequisite: GEO 351L

GEO 360 - Physical Geography of North America (3)

(3-0-3) Description and detailed analysis of the physiographic provinces. An explanation and interpretation of surface features and their evolution.

GEO 361 - The World of Caves (3)

(3-0-3) Introduction to the physical processes that create cavern systems and produce a characteristic surface landscape with sinkholes, sinking streams, and springs, known as "karst" terrain. Course includes field trips to several cave regions in Kentucky.

GEO 366 - Political Geography (3)

(3-0-3) A study of principles and concepts of political geography and their application to understanding the variation of political phenomena from place to place on earth.

GEO 370 - Geography of World Religions (3)

(3-0-3) Analysis of the distributions and geographic patterns of modern religions. Particular attention is paid to the geographic patterns that were created as a result of and that helped to create the rituals and traditions of the major world religions. Equates with IST 324.

GEO 383 - Asia (3)

(3-0-3) The human-land relations characterizing this large and diverse region. An evaluation of a continent in the midst of change in terms of geographic potentials. Equates with IST 383.

GEO 385 - The Middle East (3)

(3-0-3) A study of the Middle East, its neighbors and Islam with a focus on the physical resources, religious divisions, cultural groups and the geopolitics of the region. Equates with IST 385.

GEO 390 - Weather and Climate (3)

(3-0-3) Introduction to the physical elements of weather and climate; classifications of types and their distribution, with particular reference to the effects of climate on the earth's physical and cultural landscapes.

GEO 399 - Special Topics in Geography (1-4)

(3-0-3) Special courses which supplement regular course offerings. May be repeated if the subtitle indicates a different course is being offered. Additional prerequisites, if any, will depend upon the course offered.

GEO 401 - Remote Sensing (3)

(2-2-3) Introduction to principles, techniques and applications of remote sensing. This course provides practical training in mapping and monitoring the environment through processing of
satellite and aerial imagery and laser scanning. The course addresses management of facilities and inventory, urban modeling and analysis, land use management and monitoring, analysis of vegetation and landscape, and agricultural applications.

Prerequisite: GEO 349 or ESS 330

Corequisite: GEO 401L

GEO 405 - Conservation of Natural Resources (3)

(3-0-3) Natural resources basic to human welfare; emphasis on lands, water, minerals, forests and wildlife, including their interrelationships. Field trips are required.

GEO 455 - GIS Applications (3)

(2-2-3) Project-oriented practical exploration of applying GIS and geospatial technologies to different types of subjects, fields, and problems. The course addresses discipline-based implementation of geospatial technologies through real-world examples, hands-on practice, and advanced independent projects.

Prerequisite: GEO 351 or ESS 331

Corequisite: GEO 455L

GEO 476 - Special Problems (1-3)

(1 to 3 hrs.) Research project or directed readings on a special topic developed with the instructor.

GEO 495 - Internship in Geography (3-12)

(3 to 12 hrs.) A supervised work study experience involving a field within geography. Only six hours will count toward geography major.

GER - German

GER 101 - Beginning German I (3)

(3-0-3) Fundamentals of structure: basic vocabulary, reading, writing, pronunciation and some conversation.

GER 102 - Beginning German II (3)

(3-0-3) A continuation of GER 101.

GER 201 - Intermediate German I (3)

(3-0-3) A review of grammar and pronunciation, with emphasis on reading of contemporary writings.

GER 202 - Intermediate German II (3)

(3-0-3) A continuation of GER 201.

GER 203 - Expository German (3)

(3-0-3) Techniques of reading for accurate information in expository writing in the natural and social sciences and the humanities.

GER 301 - Grammar and Conversation (3)

(3-0-3) Further development of language skills. Extensive experience in the language laboratory is required.

GER 302 - Composition and Conversation (3)

(3-0-3) A continuation of GER 301 with greater emphasis on stylistics.

GST- Gender Studies

GST 223 - Brain Development and Sex Differences (3)

(3-0-3) Covers basic structural and functional differences between the female brain and the male brain. Major topics include differences in architecture of the brain, brain neurochemistry, higher brain functions and disorders. Equates with PSY 223 and NEUR 223.

Prerequisite: PSY 154 or NEUR/PSY 121

GST 230 - Social Welfare, History and Ethics (3)

(3-0-3) Dominant values of American society that influence both social welfare policy and social work practice will be explored through a study of the historical evolution of the institution of social welfare from the Colonial period to the present in this country. Equates with SWK 230.

Prerequisite: SWK 210

GST 273 - Introduction to Gender Studies (3)

(3-0-3) An interdisciplinary course designed to introduce students to educational, historical, aesthetic, sociological, and political conceptions of gender within and beyond the United States. This course satisfies the Level 3 Ethics and Civic Engagement SBS requirement for general education.

GST 300 - Class, Power, and Privilege (3)

(3-0-3) This course explores the nature of social inequality with an in-depth focus on the dimension of social class. Students will examine theories of privilege, oppression and the intersectional nature of inequality. Equates with SOC 300.

Prerequisite: SOC 101

GST 302 - Criminogenic Family (3)

(3-0-3) The course will focus on family risk factors for later delinquency and criminal behavior, as well as preventative intervention and treatment. This course will examine a variety of family issues including child maltreatment, domestic violence, family alcoholism, drug addiction, family chaos, inadequate or neglectful parenting, corporal punishment, which are known risk factors for later criminal behavior. Students will gain a general understanding of the macro-level processes that have detrimental effects

on family functioning and family structure. Equates with CRIM 300 and SWK 300.

GST 303 - Comparative Family Violence: An International Perspective (3)

(3-0-3) A comparative approach of family violence in the United States and Canada will be the primary focus of this course but may also include other countries. Family violence is divided into four topics: Partner/Spousal Abuse, Violence Against Children and Youth by Family Members, Family Violence Against Older Adults, and Cultural Issues. Content covered within these areas include: historical overview, definitions, theoretical frameworks, prevalence, incidence, research, responses and legislation. Equates with SWK 301.

GST 305 - Cultural Anthropology (3)

(3-0-3) A study of literate and non-literate cultures using the ethnographic approach. Universal aspects of human experience, including the family, economic, political and religious systems examined in cross-cultural perspective. Equates with IST 305 and SOC 305.

Prerequisite: SOC 101

GST 313 - Women in American History (3)

(3-0-3) Experiences and perceptions of women throughout American history. Significant roles and issues are emphasized. Equates with HST 345.

GST 320 - Women Writers and Feminist Perspectives (3)

(3-0-3) Women writers of the 19th and 20th centuries, their feminine vision and voice. Focus on primary works; attention given to feminist criticism in both theory and practice. Equates with ENG 320.

Prerequisite: ENG 100

GST 322 - Gender and Education (3)

(3-0-3) This course explores gender issues that affect male and female students from preschool to postsecondary education. Equates with EDF 322.

GST 333 - Women and Partner Violence (3)

(3-0-3) This course offers social science and experiential exposure to theories, policies, professionals and skills associated with women's experiences with intimate partner violence. The unique challenges of women in rural settings, women of color, and women in same-sex relationships are also explored. Equates with CRIM 333, SOC 333, and SWK 334.

GST 335 - Families in Modern Society (3)

(3-0-3) Examines 21st century marriage and families as diverse social institutions. Social and behavioral theories are used to analyze how economics, education, race/ethnicity, gender, sexual norms and other social institutions impact the family's role, composition, organization, and interpersonal relationships within. Equates with SOC 335 and SWK 335.

GST 337 - Sociology of Food (3)

(3-0-3) A sociological analysis of the politics, economy and culture of food. Topics include food consumption patterns, body image, health, and eating disorders; food and individual, community and cultural identity; class, ethnic, and gender-based food patterns; modern food production patterns, inequality and the environment; social food movements and social justice. Equates with CRIM 337, SOC 337, and SWK 337.

GST 340 - Community Mental Health (3)

(3-0-3) This course provides a microscopic perspective of the institutions and programs that have evolved in response to understanding a class of persons traditionally dependent upon medicine and social programs. Emphasis will be placed upon review of the values, knowledge and skills characteristic of the entry-level social worker in the community mental health agency. Equates with SWK 340.

GST 343 - Religion and Sexuality (3)

(3-0-3) This course explores the intersection between sexuality and religion in contemporary societies. Broad topics this course covers include an analysis of fundamentalist thought, metaphysics and sociology of religion through the lens of sexual behavior and sexual orientation. Equates with SOC/SWK/CRIM 343.

Prerequisite: 3 hours from SOC, CRIM, SWK, GST or consent of instructor

GST 350 - Sex and Gender (3)

(3-0-3) This course examines gender and sexuality with a critical, feminist perspective. In readings and discussions, students will explore how sexism impacts our society and intersects with other systems of oppression, such as racism, class inequality and homophobia. Equates with SOC 350.

Prerequisite: SOC 101 or GST 273

GST 351 - Philosophy of Love and Sex (3)

(3-0-3) An exploration of the central philosophical questions concerning love and sex, with reference to classical and contemporary sources: What is love? Why do we love people? Are there different kinds of love? What is sex? What makes sex bad or good, right or wrong? What is the relationship between sex and love, if any? Equates with PHIL 351.

GST 354 - Individual and Society (3)

(3-0-3) This course explains patterns of individual thoughts, behaviors, and their relationship to mid-and micro-level social structures. Topics include the institution's role in the social self, personality formation/change, aggression, and conformity. The influence of small group processes on individual behavior and identity formation also is discussed. Equates with SOC 354.

GST 355 - Sociology of the Body (3)

(3-0-3) An introduction to the sociological study of the body. Students explore the multifaceted interplay between culture, groups, identity, the Self, and the body. The social and cultural construction of bodies related to inequality based on race, class, gender, sexuality, disability and other dimensions are examined. Equates with CRIM 355, SOC 355, and SWK 355.

GST 363 - Sex Industry Perspectives (3)

(3-0-3) This course explores current theoretical debates and empirical studies on the sex industry. Topically, this course covers the feminist sex wars, stripping, prostitution, pornography and sexual trafficking. Equates with CRIM 363 and SOC 363.

GST 374 - Race and Ethnicity (3)

(3-0-3) This course adopts a critical perspective to analyze minority relations in American society. This course examines theories of prejudice and discrimination, processes of inter-group relations, the status and experiences of various minority groups, and strategies for social change. Equates with SOC 374.

Prerequisite: SOC 101

GST 375 - The Middle East (3)

(3-0-3) Survey of the Moslem world beginning with the eighth century and culminating in the present Middle Eastern situation. Equates with HST 321 and IST 374.

GST 377 - Twentieth Century Asian Wars (3)

(3-0-3) History of war in Asia from 1932 until 1975. The course examines the Pacific War, Korean War, Vietnam War, and Cambodian Conflict from the Asian perspective using a cultural approach. Equates with HST 375.

GST 380 - Race, Class, Gender and Crime (3)

(3-0-3) This course focuses on the intersection of race, class and gender membership with regard to treatment within criminal justice system by police, judges, juries and actual sentencing decisions including the death penalty. The course also provides insights about the unique types of crime most likely to be perpetrated by specific demographic groups. Students will also be exposed to criminological theories that explain criminal justice system disparity, discrimination and differences in actual offending patterns. Equates with CRIM 380 and SWK 381.

GST 394 - Gay and Lesbian Literature (3)

(3-0-3) Study of literature and sexuality, with an emphasis on the formation of a gay and lesbian literary canon. Equates with ENG 398.

Prerequisite: ENG 100

GST 452 - Issues in Contemporary Broadcasting (3)

(3-0-3) Treatment of current issues within the electronic media industry. Equates with CVM 452.

GST 474 - Women and Health (3)

(3-0-3) Increase one's awareness of the importance of women's health care in all dimensions. Emphasis will be placed on health maintenance issues for women that include women's developmental issues throughout their life span, general guidelines for health care (including screening and interventions), sexuality facts, health needs and problems related to the reproductive system, selected health care issues and psychosocial concerns. Equates with IMS 303 and NURS 303.

Prerequisite: CIS 101, COMS 108, ENG 100 and ENG 200

GST 476 - Special Problems in Gender Studies (3)

(3-0-3) This course is an independent study in gender studies for the undergraduate gender studies minor. Each request for the course will be considered on its own merits in relation to the special needs of the student. May be repeated for credit.

GST 490 - Gender Studies Capstone (3)

(3-0-3) This course is designed to integrate knowledge and understanding of gender studies issues through a mastery of research strategies and creative expressions as applied to the students' professional goals.

HLTH - Health

HLTH 151 - Wellness: Theory to Action (3)

(3-0-3) Students will develop an understanding of the multifaceted nature of wellness, identify their current health status, acquire knowledge and methods and/or techniques that can be used to promote positive change and optimal well-being. This course satisfies the Level 2 Knowledge SBS requirement for general education.

HLTH 203 - Safety and First Aid (3)

(3-0-3) Safety education and first aid care for victims of accident or sudden illness.

HLTH 205 - Psychological Health (3)

(3-0-3) Health psychology: foundations, biopsychosocial factors and psychoneuroimmunology perspectives.

HLTH 206 - Principles of Nutrition (3)

(3-0-3) Basic description of the elements of human nutrition, their function in the body and food sources. Guide for healthy nutritional practices and nutritional needs throughout the life cycle. Equates with NUTR 201.

HLTH 230 - Community Health (3)

(3-0-3) Foundations of health as applied to the community: population, health promotion, health protection and health services.

Prerequisite: HLTH 151

HLTH 301 - Health, Safety and Nutrition for Early Elementary (3)

(3-0-3) Educational theory and methods as applied to teaching health education to young children. Focuses upon content, resources and methodologies. Laboratory experiences are an integral part of the course.

Prerequisite: EDF 207 and HLTH 151

HLTH 310 - Health and Wellness Promotion (3)

(3-0-3) Emphasis on the study of the continual balancing of the different dimensions and the dynamic pursuit of holistic human needs - physical, spiritual, social, emotional, intellectual and occupational.

Prerequisite: HPE 160, NURA 103 or NURB 260

HLTH 360 - Family Health (3)

(3-0-3) Family and family living; nature of family, love, marriage preparation, marriage and parenthood issues.

HLTH 377 - Clinical and Field Experiences in School Health (P-12) (2)

(0-4-2) Clinical and field experiences related to planning, implementing and evaluating health instruction.

HLTH 408 - General School Safety (3)

(3-0-3) An exploration of the principles and practices in establishing and maintaining a safe school environment. The course gives special emphasis to current issues that affect school safety as well as the relationship between safety and health.

HLTH 414 - Principles of Epidemiology (3)

(3-0-3) A study of the factors and causes of disease in a population for the purpose of its control and prevention. The course will introduce students to the discipline of epidemiology and its application to public health issues and practices with regard to both infectious and noninfectious disease processes.

HLTH 418 - Use and Abuse of Drugs (3)

(3-0-3) A survey of the field of psychoactive drugs with emphasis upon both the behavioral and health effects of these agents. Prevention and intervention options are also explored.

HLTH 425 - Planning, Managing and Evaluating Health/Wellness Promotion Programs (3)

(3-0-3) The course emphasizes knowledge, methods in planning, designing, managing and improving health/wellness promotion programs.

Prerequisite: HLTH 310

HLTH 430 - Consumer Health (3)

(3-0-3) Analysis of the selection, purchase, and use of various health-related products, services, insurance policies, and/or healthcare facilities which impact individual health throughout the life span.

HLTH 435 - Health Counseling (3)

(3-0-3) Focuses on conceptual framework and practical health counseling strategies and skills used in a variety of settings to help individuals initiate and maintain health-orientated behavior changes. Appropriate for individuals who plan to work in schools, human service agencies, private practices, healthcare organizations, business, or other environment which work with clients interested in changing life-style health behaviors.

HLTH 470 - Practicum (15)

(0-24-15) Practical full-time experience under professional supervision in a selected and approved setting.

Prerequisite: Senior standing, 2.5 minimum GPA and HLTH 499C

HLTH 471 - Practicum (12)

(0-24-12) Practical full-time experience under professional supervision in a selected and approved setting. Students taking HLTH 471 must meet with their advisor and attend a mandatory meeting regarding the practicum in the 10th week of the semester prior to enrolling in HLTH 471. Students should contact their advisor for meeting dates and times.

Prerequisite: Senior standing, 2.5 or above overall and program content GPA

HLTH 475 - School Health Program (3)

(3-0-3) All aspects of elementary and secondary level school health: philosophy, organization and administration, environment, services, education, evaluation and the school age child.

HLTH 477 - Field Experience in Health (3)

(0-6-3) On-site work experience in a community health setting under qualified supervision. Laboratory experiences are an integral part of this course.

HLTH 480 - Workshop (1-3)

(1 to 3 hrs.) The workshop format is an interactive learning experience designed to build and/or improve specific skills with a health perspective.

HLTH 489 - Special Problems in Health (1-3)

(1 to 3 hrs.) Intensive study of approved, specific health problems, under direction of instructor.

HLTH 499C - Senior Seminar in Health Promotion (3)

(3-0-3) The course is designed to document and refine student progress relative to the professional preparation and practice of health promotion. Each student will integrate theory with practice through the design and completion of a health promotion project and a student portfolio. Graduate and professional job opportunities will be explored. Students will complete preparation leading to placement in an approved agency for the HLTH 471 practicum.

HON - Honors

HON 100 - Introduction to Honors (1)

(1-0-1) An introduction to the Honors Program at Morehead State University, with emphasis on coordinating the honors experience with the major.

Prerequisite: Admission to the Honors Program.

HON 200 - The Ancient World (3)

(3-0-3) An interdisciplinary study of important books and ideas from ancient Greece and Rome, with an emphasis on students' development of their ability to write critically about readings related to the humanities, social and behavioral sciences and natural sciences. This course satisfies the core-Writing II requirement for general education.

Prerequisite: Admission to the Honors Program.

HON 205 - Interdisciplinary Honors Core II: The Medieval World (3)

(3-0-3) An interdisciplinary study of the European Middle Ages, with emphasis on the literary and artistic achievements of the period, the religious and philosophical ideas implicit in the artworks, and the interaction of the Christian culture of medieval Europe with others, such as Islam. This course satisfies the Level 2 Knowledge HUM requirement for general education.

Prerequisite: Admission to the Honors Program.

HON 210 - Interdisciplinary Honors Core III: The Renaissance and Enlightenment World (3)

(3-0-3) A study of 16th, 17th and 18th century Western society and culture. This course will investigate Renaissance and Enlightenment concepts of national economy, population, government and urban planning in relation to developments in fields such as art, literature, medicine and theater. This course satisfies the Level 3 Ethics and Civic Engagement SBS requirement for general education.

Prerequisite: Admission to the Honors Program.

HON 215 - Interdisciplinary Honors Core IV: The Modern World (3)

(3-0-3) An interdisciplinary study of seminal books and influential ideas from the humanities, social and behavioral sciences, and natural sciences of the 19th and 20th centuries that decisively shaped our world today, with an emphasis on the development of the methods, technological advances, and knowledge within discrete disciplines belonging to the natural sciences. This course satisfies the Level 2 Knowledge NSC requirement for general education.

Prerequisite: Admission to the Honors Program.

HON 299 - Self Education (1)

(1-0-1) An independent class in which Honors students propose and carry out an approved study plan to learn material not covered in other courses at the University. May be repeated for credit. Registration by petition only.

Prerequisite: Admission to the Honors Program.

HON 300 - Honors-Enhanced Study (1)

(1-0-1) An independent course, linked with a class in the students major or minor, in which students will carry out additional research or service work related to the linked class. May be repeated for credit. Registration by petition only.

Prerequisite: Admission to the Honors Program.

HON 490 - Senior Honors Project (1)

(1-0-1) An independent project for Honors students, leading to a final paper or other appropriate product, along with a public presentation. May be repeated for credit up to a maximum of six hours. Registration by petition only.

Prerequisite: Admission to the Honors Program.

HPE - Health and Physical Education

HPE 160 - Foundations of Health and Physical Education (3)

(3-0-3) History, principles, philosophy, outcomes, standards and assessments that establish the theoretical foundation of future health and physical education teachers, health and experienced science professionals.

HPE 300 - Methods of Teaching Elementary Physical Education (3)

(2-2-3) Educational theory, strategies and methods of teaching physical education at the elementary level. Emphasis on planning, implementing and evaluating developmentally appropriate programs in physical education. Peer teaching, laboratory and supervised experiences in the public schools are integral parts of the course.

Corequisite: HPE 300L

HPE 301 - Classroom Assessment in Health and Physical Education (3)

(3-0-3) Methods, techniques and procedures used in assessment of students in physical education and health education.

Prerequisite: HPE 160

HPE 302 - Methods of Teaching Elementary Health (3)

(2-2-3) Educational theory, strategies and methods of teaching health education at the elementary level. Emphasis on planning, implementing and evaluation developmentally appropriate programs in health education. Peer teaching, laboratory and supervised experiences in the public schools are integral parts of the course.

Corequisite: HPE 302L

HPE 303 - Methods of Teaching Secondary Physical Education (3)

(2-2-3) Educational theories, strategies and methods of teaching physical education at the secondary level. Emphasis on planning, implementing and evaluating developmentally appropriate programs in physical education. Peer teaching, laboratory and supervised experiences in the public schools are integral parts of this course.

Corequisite: HPE 303L

HPE 304 - Methods of Teaching Secondary Health (3)

(2-2-3) Educational theories, strategies and methods of teaching health education at the secondary level. Emphasis on planning, implementing and evaluating developmentally appropriate programs in health education. Peer teaching, laboratory and supervised experiences in the public schools are integral parts of this course.

HPE 499C - Senior Seminar in HPE (3)

(3-0-3) A culminating experience in which candidates will review and apply the principles, strategies and theories applicable in the P-12 health and/or physical education classroom. Candidates complete a variety of experiences which will allow them to demonstrate mastery of Kentucky's Teacher Standards.

Corequisite: EDSE 416

HSM - Health Systems Management

HSM 361 - Healthcare Legal and Regulatory Environment (3)

(3-0-3) Overview of health law issues. Government regulation including constraints, liability, negligence, patient rights, confidentiality, corporate/administrative responsibility and implications of electronic health information. Emphasis on business applications of health law.

Prerequisite: BBA 261 & BBA 301

HST - History

HST 105 - U.S. History Since 1945 (3)

(3-0-3) This course will historically examine American social movements in the 20th century and their impact on our current understandings of American life. This class combines historical approaches with the legal issues of social justice as both a desired outcome of these movements and a means of regulating American Society. In order for students to be responsible citizens in our world, they must understand both the history of America and the legal struggles over issues of equality and social change.

HST 110 - World History Since 1945 (3)

(3-0-3) This course will examine the history of our world since 1945. Using a variety of approaches, including narrative reasonings, historical primary sources and film, this course will introduce students to cultures across the world, helping them to construct a global historical narrative.

HST 111 - World History through Film (3)

(3-0-3) This course seeks to examine the portrayal of world history in films against both the historical reality of actual events and the intellectual and cultural forces that shaped the making of these movies. Through the reading of historical primary sources, scholarly articles from history, art, cinema, film, literature, English and interdisciplinary journals, students will learn how to critically interpret a variety of scholarly readings and understand scholarly arguments.

HST 260 - American History to 1865 (3)

(3-0-3) Analysis of historic themes and issues from the Age of Discovery through the Civil War.

HST 261 - American History since 1865 (3)

(3-0-3) Entry level course using historical and literary texts and multimedia approaches to familiarize students with the nation's social, political, economic and cultural development. This course satisfies the Level 2 Knowledge SBS requirement for general education.

HST 270 - World History to 1500 (3)

(3-0-3) A study of the history, culture and ideas of early world cultures, beginning with the oldest civilizations of the Ancient Near East and ending with the Age of Exploration and Colonization. This course examines the major geographical areas thematically, concentrating on the impact of the major world religions and the relationships between peoples as well as the political, economic, social and technological development of these world religions.

HST 271 - World History Since 1500 (3)

(3-0-3) This course will introduce students to the study of world cultures and provide an understanding of contemporary global issues. Using historical and literary texts, CD-ROM technology and films in a multimedia approach, students will examine selected social, political, economic and cultural phenomena in the context of world history. Equates with IST 201. This course satisfies the Level 2 Knowledge HUM requirement for general education.

HST 300 - Practicing History (3)

(3-0-3) Entry-level course for majors and minors. Students complete book reviews, automated library searches, discuss career options, learn about historiography and use historical methods in writing and oral communication. Student portfolios are initiated in this class.

HST 301 - Colonial America (3)

(3-0-3) Critical analysis of events from the Age of Discovery to the Revolutionary War.

HST 302 - The Early Republic (3)

(3-0-3) Critical analysis of events from the American Revolution to the Jeffersonian era.

HST 303 - Antebellum America (3)

(3-0-3) Analysis of national, political and social movements when America sought compromise but found Civil War.

HST 304 - The Civil War and Reconstruction (3)

(3-0-3) The role of the southern states in the rebirth of the American nation.

HST 305 - America 1887-1939 (3)

(3-0-3) History of the United States from the end of Reconstruction until entry into World War II. The course focuses on industrialization and the expansion of corporate life, the social, cultural and demographic changes (especially migration and immigration) that accompanied industrial and commercial transformation, and social and political movements of the Gilded Age, Progressive, Depression and New Deal eras.

HST 306 - America 1939 to Present (3)

(3-0-3) America from World War II to the end of the Cold War. Emphasis is placed on social conditions and issues.

HST 310 - Introduction to Public History (3)

(3-0-3) This course serves as an introduction into the topic of applied history and its sub-fields. Students will explore how the past is presented to the public and how this interpretation changes with each generation. This course will also explore the different fields of public history such as historic preservation, site interpretation, museum studies and cultural resource management.

HST 311 - Ancient History (3)

(3-0-3) The earliest civilizations of the Nile and the Fertile Crescent and their impacts on western civilization.

HST 312 - Medieval Europe (3)

(3-0-3) Western history from the collapse of Rome to the Renaissance of the 16th century.

HST 313 - The Renaissance and Reformation (3)

(3-0-3) A social and intellectual history of the beginning of modern Europe.

HST 314 - Nineteenth Century Europe (3)

(3-0-3) The politicians, nationalistic trends and unification movements leading to World War I. Equates with IST 359.

HST 315 - Twentieth Century Europe (3)

(3-0-3) Detailed survey of World War II, the Cold War and contemporary events. Equates with IST 361.

HST 316 - England to 1688 (3)

(3-0-3) The political, social, and economic institutions of England through the fall of the Puritan Commonwealth. Equates with IST 351.

HST 317 - England since 1688 (3)

(3-0-3) Study of England from the Restoration to the rise of the British Commonwealth. Equates with IST 352.

HST 318 - Europe's Eastern Frontier to 1739 (3)

(3-0-3) The story of Russia from Kievan times to the overthrow of the Romanov dynasty. Equates with IST 353.

HST 319 - The Russian Empire (3)

(3-0-3) Detailed account of Soviet Russia from revolution through the end of the Cold War. Equates with IST 354.

HST 320 - Modern Germany (3)

(3-0-3) History of Germany from unification to the present in the context of European and world events. Equates with IST 355.

HST 321 - The Middle East (3)

(3-0-3) Survey of the Moslem world beginning with the eighth century and culminating in the present Middle Eastern situation. Equates with IST 374 and GST 375.

HST 322 - African History (3)

(3-0-3) Focus on early African states, the slave trade era, the rise and fall of imperial empires and post-independence events. Equates with IST 370.

HST 323 - Traditional China (3)

(3-0-3) Survey of early Chinese civilization and its institutions. Equates with IST 371.

HST 324 - Modern China (3)

(3-0-3) Survey of Chinese history since the 19th century. Equates with IST 372.

HST 325 - Japanese Civilization (3)

(3-0-3) Survey of Japanese history from the beginning of its civilization to its rise as a world power. Equates with IST 373.

HST 326 - Latin American History (3)

(3-0-3) The Indian background, the rise and fall of the Iberian empires and major events since independence. Equates with IST 379.

HST 327 - History of Canada (3)

(3-0-3) A study of Canada's intellectual, political, economic and social development, including its colonial origins, the creation and evolution of its confederation, and the nature of its involvement in international affairs. Equates with IST 331.

HST 330 - Special Topics in Public History (3)

This course examines a specific topic not part of the regular course offerings with the intent to capitalize on the research interests of both students and individual professors. The emphasis will be in the scholarship of the topic with accompanying readings and writings as appropriate to the subject. Specific content varies. The course may be repeated for credit if content differs.

HST 340 - Seminar in American History (3)

(3-0-3) This course examines a specific topic not part of the regular course offerings with the intent to capitalize on the research interests of both students and individual professors. The emphasis will be in the scholarship of the topic with accompanying readings and writings as appropriate to the subject. Specific content varies and may cover any part of American history. The course may be repeated if content differs.

HST 341 - The American Frontier (3)

(3-0-3) The westward movement and the shaping of American life and institutions.

HST 342 - Native American History (3)

(3-0-3) Historical development of Native Americans from their entrance into this hemisphere to current conditions and issues.

HST 343 - Religion in American History (3)

(3-0-3) Religion's interaction with facets of American society. The role of religion in molding the nation.

HST 344 - African American History (3)

(3-0-3) African-American history from the origins of slavery to contemporary times.

HST 345 - Women in American History (3)

(3-0-3) Experiences and perceptions of women throughout American history. Significant roles and issues are emphasized. Equates with GST 313.

HST 346 - United States Foreign Relations (3)

(3-0-3) Survey of foreign relations of the United States from its conception to United Nations involvement.

HST 347 - American Military History (3)

(3-0-3) Origins, course and effects of American involvement in war.

HST 348 - America in the Nuclear Age (3)

(3-0-3) This course examines the history of the United States since the end of World War II. The course integrates cultural, social and economic developments in the United States during the Nuclear Era against the backdrop of the ideological Cold War struggles between communism and anticommunism.

HST 349 - American Cultural History (3)

(3-0-3) Survey of American intellectual heritage from Puritanism to the contemporary era.

HST 350 - Violence in America (3)

(3-0-3) This course explores theories of violence and to gain familiarity with historical work through case studies. Based on events in American history, students will read and understand themes such as class struggle, racial violence, religious persecution and terrorism.

HST 351 - Vietnam and Watergate (3)

(3-0-3) Study of the Vietnam War and the Watergate scandal in the context of policy developments in America since 1945.

HST 352 - History of Appalachia (3)

(3-0-3) A social, economic and political history of the people and the events of the Appalachian Mountains.

HST 353 - History of Kentucky (3)

(3-0-3) Colonial birth to the creation of the Commonwealth with emphasis on constitutional and social development.

HST 354 - The Old South (3)

(3-0-3) A study of southern sectionalism and the ongoing development of regional characteristics.

HST 355 - The New South (3)

(3-0-3) This course examines the development of the South since the end of the Civil War in 1865. It considers the effects of abolition of slavery, segregation, the Civil Rights movement and the rise of the urban South.

HST 356 - Struggles for Reform in America (3)

(3-0-3) This course examines both popular and governmental efforts at attaining social and economic reform in the United States from the founding of the republic through the progressive era, the "Great Society," and contemporary America. Students will consider the concept and nature of reform from various social and political contexts.

HST 357 - United States Urban History (3)

(3-0-3) This course examines the development of cities in the United States since the end of the Civil War in 1865. It considers the effects of immigration, industrialization, the rise of modern cities and urban politics and issues.

HST 370 - Seminar in European History (3)

(3-0-3) This course examines a specific topic not part of the regular course offerings with the intent to capitalize on the research interests of both students and individual professors. The emphasis will be in the scholarship of the topic with accompanying readings and writings as appropriate to the subject. Specific content varies and may cover any part of Europe and any chronological era. The course may be repeated if content differs.

HST 371 - Seminar in World History (3)

(3-0-3) This course examines a specific topic not part of the regular course offerings with the intent to capitalize on the research interests of both students and individual professors. The emphasis will be in the scholarship of the topic with accompanying readings and writings as appropriate to the subject. Specific content varies and may cover any part of world history and any chronological era. The course may be repeated if content differs.

HST 372 - Revolutionary Europe (3)

(3-0-3) History of Europe from the Age of Absolutism to the collapse of the Napoleonic Empire. Equates with IST 358.

HST 373 - The Cold War in Eastern Europe (3)

(3-0-3) This course serves as an introduction into the topic of the Cold War in Eastern Europe. The topics selected allow students to gain an understanding of the major political events, economic developments and social trends that characterize this part of the world. Additionally, students will learn how to critically analyze different, and at times, conflicting points of view.

HST 374 - War in the Modern World (3)

(3-0-3) This course explores theories of modern warfare through the use of historical works and case studies. Based on events in world history from World War II to the present, students will read and understand themes such as ideology, military planning and the human experience.

HST 375 - Twentieth Century Asian Wars (3)

(3-0-3) History of war in Asia from 1932 until 1975. The course examines the Pacific War, Korean War, Vietnam War and Cambodian Conflict from the Asian Perspective using a cultural approach. Equates with GST 377.

HST 380 - Junior Seminar (3)

(3-0-3) Required of each history major. Common research effort will be undertaken.

HST 382 - Honors Seminar (3)

(3-0-3) Analysis of historical events and circumstances, their origins and effects.

HST 390 - Selected Topics in History (1-3)

(1 to 3 hrs.) This course may be repeated if content differs.

HST 391 - Directed Readings (3)

(3-0-3) This course examines a specific topic not part of the regular course offerings with the intent to capitalize on the research interests of both students and individual professors. The emphasis will be in the scholarship of the topic with accompanying readings and writings as appropriate to the subject. Specific content varies. The course may be repeated for credit if content differs.

HST 392 - Internship (1-3)

(1 to 3 hrs.) This course offers students the change to engage in internships in the related field of their choosing. This course can be taken for one - three hours, depending on the number of internship work hours. Students must work 120 hours for a three credit hour internship, 80 hours for a two credit hour internship, and 40 hours for a one credit hour internship.

HST 476 - Directed Study (3)

(3-0-3)

HST 499C - Senior Seminar in History (3)

(3-0-3) Each student will complete a research project that integrates methodological and substantive aspects of the history discipline. Each student will prepare and present a paper to fellow students and a department committee. Course provides opportunity for review of professional and graduate opportunities.

HUM - Humanities

HUM 203 - Medieval Culture (3)

(3-0-3) A writing-intensive and interdisciplinary course that provides students with the knowledge and the skills to study and analyze medieval culture, and by extension, other cultures radically different from their own.

Prerequisite: "C" or better in EDEL 096 or ACT reading score of 18

HUM 250 - American and Global Citizenship (3)

(3-0-3) This course is a study of the history, conceptualization and debates over national and global citizenship primarily in the United States. The class will investigate concepts of effective citizenship in debates over the Constitution, the struggles over the recognition of women, non-whites and recent immigrants as citizens over the course of American history, and recent developments in multicultural and global citizenship.

Prerequisite: ENG 100

HUM 305 - Good and Evil (3)

(3-0-3) An interdisciplinary study of the nature of good and evil, including perspectives derived from areas such as philosophy, psychology, history, literature, art, etc.

Prerequisite: ENG 200

HUM 340 - Health and the Hispanic Community: Cultural Perspectives (3)

(3-0-3) A foundation course for the development of cultural sensitivity through the examination of culturally diverse values and beliefs with a focus on the experience of Hispanic communities. The course includes individual projects where students will gather materials and develop skills needed to communicate with the Hispanic population of the United States.

IECE - Interdisciplinary Early Childhood Education

IECE 301 - At-Risk Infants and Toddlers (3)

(3-1-3) *Admission to TEP is required.* Development and causes of difficulties experienced by at-risk infants and toddlers, as well as early intervention approaches to be used with these children and their families. Completion of the required field experience is an integral part of this course.

Prerequisite: EDSP 230, EDEC 253, IECE 311, and IECE 416.

IECE 311 - Introduction to Early Childhood (3)

(3-1-3) How the learning environment is established to provide optimal learning experiences and to guide children in developing responsible behavior. Completion of the required field experience is an integral part of this course.

Prerequisite: EDF 207

IECE 345 - Preschoolers with Special Needs (3)

(3-1-3) *Admission to TEP is required.* This course will encompass the characteristics, needs and assessment of exceptional children during the preschool years. Needs and involvement of families will be an important emphasis. Completion of the required field experience is an integral part of this course.

Prerequisite: EDSP 230, EDEC 253, IECE 311, and IECE 418.

IECE 360 - Families in Early Childhood Education (3)

(3-0-3) This course provides theoretical and practical approaches to working with families in early childhood education programs, including families of at-risk and special needs children. Completion of the required field experience is an integral part of this course.

Prerequisite: EDF 207

IECE 361 - Positive Child Guidance (3)

(3-1-3) This course provides positive strategies for guiding the behavior of young children. Candidates will learn both preventive and corrective discipline measures. Completion of the required field experience is an integral part of this course.

Prerequisite: EDF 207

IECE 410 - The Role of the Teacher: Designing Language and Cognitive Activities for Diverse Groups (3)

(3-0-3) One of a block of three courses that will focus on knowledge, skills and methodology necessary to develop the role of the early childhood teacher. The focus of this course is the development of cognitive and language activities.

IECE 412 - The Role of the Teacher: Designing the Implementation of Creative Play Activities for Young Children (3)

(3-1-3) The role of the early childhood teacher in implementing creative play activities for young children from birth to age five.

IECE 416 - Infant/Toddler Program Planning (3)

(3-1-3) *Admission to TEP is required.* This course investigates the needs and interests of infant and toddlers and develops professional views in selecting, implementing and designing appropriate teaching materials as well as instruction that can foster children's growth in each developmental area-cognitive, aesthetic, emotional, social, and physical. Laboratory experiences are an integral part of this course.

Prerequisite: EDEC 253, EDEE 305, and IECE 311

IECE 418 - Preschool Program Planning (3)

(3-1-3) *Admission to TEP is required.* Investigates needs and interests of early childhood and provides opportunities to explore objectives, materials and techniques of instruction for this age group. Laboratory experiences are integral parts of this course.

Prerequisite: EDEC 253, EDEE 305 and IECE 311

IECE 425 - Clinical Practice: Infants and Toddlers and Preschool for 3-5 year olds (12)

(12 hrs.) *Admission to TEP is required.* Placement in approved infant/toddler and in approved preschool settings for children ages 3-5 years for clinical semester to include observation, participation and family support in accordance with Kentucky Interdisciplinary Early Childhood Education Standards. Special conferences with supervising teacher, attendance and participation in faculty and out-of-school activities required.

IECE 457 - Professional Assessment (3)

(3-0-3) This course has two components: assessment and certification portfolio preparation. Final course for students in the IECE certification preparation program, prior to the professional semester. Students will complete assessment for certification and finalize and professionalize their certification portfolio. Assessments required for teacher certification will be administered in this course.

IMS - Imaging Sciences

IMS 100 - Orientation to Health Care Professions (1)

(1-0-1) A study of career opportunities available in health care, the standard program requirements and an overview of the job responsibilities.

IMS 202 - Medical Terminology (2)

(2-0-2) The study of vocabulary components and terms related to sciences and medicine. Previous knowledge of medicine or related discipline is not necessary. Equates with NURS 202.

IMS 300 - Ethical and Legal Issues in Health Care (3)

(3-0-3) This course is an overview of the ethical and legal issues in today's health care environment. Emphasis includes such areas of discussion as confidentiality, HIV/AIDS, artificial life support, euthanasia, abortion, genetic science, allocation of resources and professional gatekeeping. Equates with NURS 300.

IMS 301 - Selected Topics (1-3)

(1 to 3 hrs.) Investigation of specific topics of interest related to nursing and/or allied health sciences. Equates with NURS 301.

IMS 302 - Health Maintenance Through Life (3)

(3-0-3) This course is designed to increase one's awareness of the importance of health maintenance throughout the life span. Emphasis will be on the concepts of health maintenance through health promotion and illness prevention strategies for all stages of the life span. Equates with NURS 302.

IMS 303 - Women's Health Care (3)

(3-0-3) Increase one's awareness of the importance of women's health care in all dimensions. Emphasis will be placed on health maintenance issues for women that include women's developmental issues throughout their life span, general guidelines for health care (including screening and interventions), sexuality facts, health needs and problems related to the

reproductive system, selected health care issues and psychosocial concerns. Equates with NURS 303 and GST 474.

IMS 304 - Men's Health Issues (3)

(3-0-3) This course is designed to increase one's awareness of the importance of men's health issues in all dimensions. Emphasis will be placed on health maintenance issues for men that include men's developmental issues throughout their life span, general guidelines for health care (including screening and interventions), sexuality facts, health needs and problems related to the reproductive system, selected health care issues and psychosocial concerns. Equates with NURS 304.

IMS 321 - Introduction to Multidisciplinary Health Services (3)

(3-0-3) A study of various health careers focusing on the roles and responsibilities, levels of education and credentialing, daily functions, and career advancement options. Equates with NURS 321.

IMS 331 - Issues and Trends in Health Care Delivery (3)

(3-0-3) This course is a survey course of health care delivery in the United States, which will allow students to gain a more global picture of health care and public health services.

IMS 341 - Sectional Anatomy for the Medical Imaging Professional (3)

(3-0-3) This course is designed to provide a solid foundation for acquiring knowledge of sectional anatomy utilized in the medical imaging profession. Emphasis will be placed on imaging planes and a systematic approach and evaluation of sectional anatomy as visualized by various imaging modalities.

IMS 345 - Global Health (3)

(3-0-3) Through this course, the student will develop a global awareness of societal aspects of health and disease through the critical examination of the sociopolitical constraints in health and health care of populations. The roles of community, national and international health organizations will be examined. Equates with IST 345 and NURS 345.

IMS 351 - Picture Archiving and Communication Systems (3)

(3-0-3) Picture Archiving and Communication Systems (PACS) are now part of the fundamental technological infrastructure supporting radiology practice in the digital age. This course is an introduction to concepts of PACS, networking fundamentals, DICOM, image acquisition and the equipment used. Legal issues and formal PACS policies will also be discussed.

IMS 361 - Leadership for the Health Care Professional (3)

(3-0-3) This course provides students with a knowledge base and foundations for the study and practice of leadership in health care systems. Emphasis is placed on the theories of leadership, structures of organizations in health care, and the effective/efficient use of human and material resources. Equates with NURS 361.

IMS 401 - Health Care Law and Policy (3)

(3-0-3) This is a survey of the law and policy of health care, covering the history of health care law and policy, the fundamental principles of law as applied to health care, and the federal and state legislation and regulations related to health care.

IMS 421 - Program Planning, Evaluation, and Assessment (3)

(3-0-3) This course is designed to provide a foundation for developing educational programs in medical imaging sciences. Emphasis will be placed on program development, accreditation and evaluation.

IMS 431 - Operations Management in Healthcare (3)

(3-0-3) An in-depth study of the operations of the imaging sciences department. The course will focus on improving productivity and other areas of performance within the healthcare setting.

IMS 471 - Teaching Methodologies in Imaging Sciences (3)

(3-0-3) This course focuses on learning styles and teaching techniques with emphasis on effective presentation strategies for managers and educators in the medical imaging professions.

IMS 473 - Health Care Management of Children (3)

(3-0-3) Open to any interested student. Promotion of wellness of children and adolescents with emphasis on meeting the health care needs of children in the classroom and home. Discussion of basic first aid, common acute and chronic illness in children. Equates with NURS 473.

IMS 481 - Fiscal Management in Healthcare (3)

(3-0-3) A study of the concepts of economics and financial management in the health care arena, including budgeting, breakeven analysis, financial reporting and business plan preparation.

IMS 491 - Curriculum Development in Imaging Sciences (3)

(3-0-3) A study of the principles of course development and strategies for planning, development and implementation of curricula in imaging sciences.

IMS 499C - Senior Seminar in Imaging Sciences (3)

(3-0-3) An integrated capstone course designed to forge an interdisciplinary learning experience centered on leadership, business management, teaching/learning and health care regulation aspects in medical imaging. Students interact as both participants and presenters in a seminar environment where various diagnostic imaging modalities are represented. Emphasis is on preparation for a leadership career in medical imaging.

Prerequisite: Admission to the baccalaureate imaging sciences program.

IST - Global Studies

Equated courses can only be taken once for credit. If an equated course is taken a second time using a different prefix, it will be considered a repeat.

IST 101 - Introduction to International Studies (3)

(3-0-3) An exploration of global citizenship through the interdisciplinary perspectives of the humanities, technology, education, science and economics. Students will be challenged to critically examine the relationship of intercultural and international issues, and to use problem-solving skills as they investigate topics and issues of universal concern. This course satisfies the Level 3 Global Cultures HUM requirement for general education.

IST 197 - World Languages I (3)

(3-0-3) An introductory course in a language not usually offered at the University. May be repeated for credit as topic varies.

IST 198 - World Languages II (3)

(3-0-3) A second semester course in a language not usually offered at the University. May be repeated for credit as topic varies.

Prerequisite: IST 197

IST 201 - World History since 1500 (3)

(3-0-3) This course will introduce students to the study of world cultures and provide an understanding of contemporary global issues. Using historical and literary texts, CD-ROM technology and films in a multimedia approach, students will examine selected social, political, economic and cultural phenomena in the context of world history. Equates with HST 271. This course satisfies the Level 2 Knowledge HUM requirement for general education.

IST 204 - Agricultural Economics (3)

(3-0-3) Analysis of contemporary problems and issues of public concern relating to food, agriculture and rural areas using the tools of fundamental

economic concepts. Farm income, food prices, world food problems, natural resources, environment and rural development issues will be studied. Equates with AGR 204.

IST 205 - French Culture and Civilization (3)

(3-0-3) Survey of art, architecture, music and history of France. Cuisine, fashion and cinema. The imprint of France on America and the Third World. Taught in English; some knowledge of French helpful but not required. Equates with FRN 205.

IST 206 - Business French (3)

(3-0-3) Introduction to the French-speaking business world. Special attention to etiquette, interpersonal relations and daily culture. Investigation of current French practices in marketing, banking, real estate, advertising and the media. Study of authentic documents and regalia. Comparison of French and American systems of job training and placement. Course taught in English, some knowledge of French helpful. Equates with FRN 206.

IST 211 - Introduction to World Literature I (3)

(3-0-3) Comparative study of world literature to 1650 in English or English translation, with an emphasis on various genres. Equates with ENG 211. This course satisfies the Level 2 Knowledge HUM requirement for general education.

IST 212 - Introduction to World Literature II (3)

(3-0-3) A comparative study of dramatic, lyric and narrative literatures of the world after the 16th century. Equates with ENG 212.

IST 221 - World Religions I (3)

(3-0-3) Origin, development, assumptions, values, beliefs, practices, great leaders and principal events of Judaism, Christianity, Islam and Zoroastrianism. Equates with REL 221.

IST 250 - International Culture and Diversity (3)

(3-0-3) This course introduces students to cultural diversity across the world. This includes religion, language, music, the economy, food, sports, and literature. These topics will be integrated with a focus on ethnic and racial diversity, indigenous peoples, and an examination of gender roles. This course satisfies the Level 3 Global Cultures HUM requirement for general education.

IST 260 - Globalization (3)

(3-0-3) A study of the human activity that integrates our global community. This course will examine the ongoing process by which regional economies, societies, and cultures have become integrated though a world-wide network of exchange and control.

IST 264 - Ancient-Medieval (3)

(3-0-3) An examination of ancient Near Eastern, Egyptian, Greek, Roman and Medieval art. It includes a study of materials, techniques, subjects, styles, issues functions and meanings. Equates with ART 264.

IST 265 - Renaissance-Modern (3)

(3-0-3) An examination of art from the Renaissance to the present. It includes a study of materials, techniques, subjects, styles, issues, functions and meanings. Equates with ART 265.

IST 300 - World Geography (3)

(3-0-3) A general survey of the human and physical geography of the major regions of the world with a concentration on development. Emphasis is on the interaction between individuals and the physical and cultural landscape in various settings. Equates with GEO 300.

IST 301 - Education Abroad Experience (1)

(0-1-1) This class will provide the student with experience in a foreign country for a minimum of a two-week period. An education abroad experience may be through one of the education abroad consortia in which Morehead State holds membership or through a pre-approved education abroad program. Prior application for IST 301 should be made to the program coordinator for interdisciplinary international studies.

IST 305 - Cultural Anthropology (3)

(3-0-3) A study of literate and non-literate cultures using the ethnographic approach. Universal aspects of human experience, including the family, economic, political and religious systems examined in cross-cultural perspective. Equates with SOC 305 and GST 305.

Prerequisite: SOC 101

IST 308 - Internship in International Studies (1-3)

(1 to 3 hrs.) Petition required. This is an international studies internship. It is a competency-based practical experiences designed to help students develop marketable skills related to international studies.

IST 309 - Study Abroad for International Studies (3)

(3-0-3) This course will provide academic credit for completing and participating in an approved educational course, program, or experience in another country. Students must receive pre-approval before being allowed to register for this course.

IST 310 - Australia (3)

(3-0-3) Resources of Australia, New Zealand and islands of the Pacific; significance of position and political connection of these lands. Equates with GEO 310.

IST 311 - Geography of the Global Economy (3)

(3-0-3) Spatial analysis of higher level economic activities. Focus is on wholesaling, interregional and international trade and transportation, producer services and investment. Equates with GEO 311.

IST 312 - Islamic Cultures of Africa (3)

(3-0-3) A study of the sociopolitical impacts of Islam on African societies from the seventh century to the present, and of the cultural adaptations and self-appropriations of Islamic traditions by selected African communities and/or states across the major regions of the continent.

IST 314 - Increasing Cultural Awareness (1)

(1-0-1) This course prepares students to deal with diverse cultural environments and people who are different from themselves.

IST 315 - International Studies Foundations (3)

(3-0-3) A survey of major theoretical and policy contributions to the field of international studies.

Prerequisite: IST 101

IST 316 - International Studies Approaches (3)

(3-0-3) This course provides a comprehensive survey of interdisciplinary approaches and a diverse array of methodologies used to address prominent questions in the international studies field.

Prerequisite: IST 101

IST 321 - Asian Philosophy (3)

(3-0-3) An examination of the major philosophical theories of Hinduism, Buddhism, Confucianism and Taoism. Equates with PHIL 320.

IST 322 - Global Ideologies (3)

(3-0-3) A study of the most important social, political, religious, environmental, and cultural ideas circulating in the global community.

IST 323 - Global Culture (3)

(3-0-3) A study of the history, institutions, values, and rituals of global culture.

IST 324 - Geography of World Religions (3)

(3-0-3) Analysis of the distributions and geographic patterns of modern religions. Particular attention is paid to the geographic patterns that were created as a result of and that helped to create the rituals and traditions of the major world religions. Equates with GEO 370.

IST 326 - Cuba and the Caribbean (3)

(3-0-3) The people and places of the Caribbean basin with a concentration on climate, culture, economics and tourism. A special focus will address the dynamics of Cuban socioeconomic development. Equates with GEO 326.

IST 327 - International Travel and Tourism (3)

(3-0-3) A general survey of the dynamics of the global travel and tourism industry.

IST 328 - Africa (3)

(3-0-3) Resources, both natural and cultural; changing political conditions and affiliations of African countries, recognition of, and reasons for, the growing importance of this continent in world affairs. Geographic factors in the economic, social and political structure of Europe; emphasis on natural regions, resource distribution and industrial development. Equates with GEO 328.

IST 330 - Perspectives on Canada (3)

(3-0-3) A multidisciplinary study of the geography, history, society, politics and economy focusing on contemporary Canadian domestic and international issues, including Quebec's role in the Canadian federation, transborder economic and cultural relationships with the United States, and Canada's participation in world affairs.

IST 331 - History of Canada (3)

(3-0-3) A study of Canada's intellectual, political, economic and social development, including its colonial origins, the creation and evolution of its confederation, and the nature of its involvement in international affairs. Equates with HST 327.

IST 332 - First Nations of Canada (3)

(3-0-3) A comparative study of representative North American Native cultures focusing on first nations of Canada, including Ojibwe, Huron, Cheyenne, Lillooet, Nootka, Dene and Inuit, and using ethnographic, ethnohistoric and anthropological models.

IST 333 - Government and Politics of Britain and Canada (3)

(3-0-3) A comparative study of the parliamentary governments of Canada and Great Britain, their political cultures, public opinions, interest groups and political parties; the evolution, structure and operation of their constitutional governments, the behavior of their public officials and their public policies.

IST 335 - Political Economy and Environmental Policy in Canada (3)

(3-0-3) A study of political dimensions of the Canadian economy and Canada's domestic and international environmental policies, including U.S. Canadian environmental issues and Canada's role in crafting international environmental policies.

IST 336 - Politics of the North American Auto Industry (3)

(3-0-3) A study of the politics of United States and Canadian automobile industries focusing on its managerial practices, labor relations, the recruitment of Japanese auto manufacturers and the challenge of their production methods to the North American auto and its labor unions, and their responses.

IST 340 - Spanish Culture and Civilization (3)

(3-0-3) Study of the architecture, history, literature, music, customs, current events and ways of life in Spain. Equates with SPA 304.

Prerequisite: SPA 202

IST 341 - Latin American Culture and Civilization (3)

(3-0-3) Study of the architecture, art, geography, history, literature, music, customs, current events and ways of life on the Latin American world. Equates with SPA 306.

Prerequisite: SPA 202

IST 345 - Global Health (3)

(3-0-3) Through this course, the student will develop a global awareness of societal aspects of health and disease through the critical examination of the sociopolitical constraints in health and health care of populations. The roles of community, national and international health organizations will be examined. Equates with IMS 345 and NURS 345.

IST 346 - Global Environmental Sustainability (3)

(3-0-3) The study of environmental concepts, issues and dynamics from a spatial and geographic perspective. Equates with GEO 345.

IST 350 - Communication, Culture and Diversity (3)

(3-0-3) An examination of speech communication theory and skills useful under conditions of cultural diversity with a focus on the improvement of communication across cultural and group verbal and nonverbal language systems. Equates with COMS 350.

Prerequisite: COMS 108

IST 351 - England to 1688 (3)

(3-0-3) The political, social and economic institutions of England through the fall of the Puritan Commonwealth. Equates with HST 316.

IST 352 - England Since 1688 (3)

(3-0-3) Study of England from the Restoration to the rise of the British Commonwealth. Equates with HST 317.

IST 353 - Europe's Eastern Frontier to 1709 (3)

(3-0-3) The story of Russia from Kievan times to the overthrow of the Romanov dynasty. Equates with HST 318.

IST 354 - The Russian Empire (3)

(3-0-3) Detailed account of Soviet Russia from revolution through the end of the Cold War. Equates with HST 319.

IST 355 - Modern Germany (3)

(3-0-3) History of Germany from unification to the present in the context of European and world events. Equates with HST 320.

IST 358 - Revolutionary Europe (3)

(3-0-3) History of Europe from the Age of Absolutism to the collapse of the Napoleonic Empire. Equates with HST 372.

IST 359 - Nineteenth Century Europe (3)

(3-0-3) The politicians, nationalistic trends and unification movements leading to World War I. Equates with HST 314.

IST 361 - Twentieth Century Europe (3)

(3-0-3) Detailed survey of World War II, the Cold War and contemporary events. Equates with HST 315.

IST 370 - African History (3)

(3-0-3) Focus on early African states, the slave trade era, the rise and fall of imperial empires, and post-independence events. Equates with HST 322.

IST 371 - Traditional China (3)

(3-0-3) Survey of early Chinese civilization and its institutions. Equates with HST 323.

IST 372 - Modern China (3)

(3-0-3) Survey of Chinese history since the 19th century. Equates with HST 324.

IST 373 - Japanese Civilization (3)

(3-0-3) Survey of Japanese history from the beginning of its civilization to its rise as a world power. Equates with HST 325.

IST 374 - The Middle East (3)

(3-0-3) Survey of the Moslem world beginning with the eighth century and culminating in the present Middle Eastern situation. Equates with HST 321 and GST 375.

IST 379 - Latin American History (3)

(3-0-3) The Indian background, the rise and fall of the Iberian empires, and major events since independence. Equates with HST 326.

IST 383 - Asia (3)

(3-0-3) The human-land relations characterizing this large and diverse region. An evaluation of a continent in the midst of change in terms of geographic potentials. Equates with GEO 383.

IST 385 - The Middle East (3)

(3-0-3) A study of the Middle East, its neighbors and Islam with a focus on the physical resources, religious divisions, cultural groups and the geopolitics of the region. Equates with GEO 385.

IST 399 - Selected Topics in Global Studies (3)

(3-0-3) Special course which supplements regular course offerings. May be repeated if the subtitle indicates that a different course is being offered.

IST 401 - Seminar in International Studies (3)

(3-0-3) Analysis and discussion of topics in international studies. With guidance of international studies faculty, students will prepare and present a major research project that will establish a record of intercultural context in relation to the topic of their research.

Prerequisite: IST 101 and six hours in IST

IST 409 - International Management (3)

(3-0-3) A global view of management within various cultures and countries. The course covers international competition, cross-national ethics, international strategy, cross-cultural management, international human resources and international leadership. Equates with MNGT 409.

Prerequisite: MNGT 301

IST 430 - Canadian Parliament Internship (3)

(3-0-3) A five-week summer internship with a member of the Canadian Parliament in Ottawa. Prior approval of the internship supervisor is required.

IST 447 - International Economics (3)

(3-0-3) International trade theory, international monetary relationships and the balance of payments. Emphasis is placed on contemporary problems and possible solutions. Equates with ECON 447.

Prerequisite: ECON 101 or higher

IST 469 - International Marketing (3)

(3-0-3) The role of the United States in the competitive arena of world trade. Preparing students to operate and compete globally; how to find new markets to replace saturated markets, how to determine which products international customers want, how to customize products for these demands, how to best reach these customers, what pricing strategies are most appropriate, what distribution channels are adequate, and how to overcome barriers that hinder implementation of marketing programs. Equates with MKT 469.

Prerequisite: MKT 204

IST 476 - Directed Studies (1-3)

(1 to 3 hrs.) This course is a directed study for the undergraduate International Studies major. Each request for the course will be considered on its own merits in relation to the special needs of the student. Petition required.

IST 481 - German Art of the 20th Century (3)

(3-0-3) This course will examine the visual expression of German, Austrian and Swiss artists of the 20th century, including Die Brucke, Der Blaue Reiter, Dada, Neue Sachlichkeit, Surrealism, Bauhaus, art of National Socialism and postwar developments in the art of both West and East Germany. Particular emphasis will be placed on art and artists in relationship to political and social events of the time, especially the two world wars, the rise of National Socialism and the Cold War. Equates with ART 481.

IST 482 - Contemporary World Art (3)

(3-0-3) This course will provide a worldwide survey of contemporary visual arts in historical context and will explore current issues in contemporary art. Equates with ART 482.

IST 499C - Senior Seminar (3)

(3-0-3) This course will integrate and synthesize students' knowledge of international political, economic, cultural and social relationships between nation-states, as well as the influence of international governmental and non-governmental organizations on those relationships, as well as on domestic and foreign policies. Students will develop a more thorough understanding of societal and cultural similarities and differences across nations through a dialogue with other students focused around their international study abroad experiences. Students will study and attempt to gain a better understanding of current issues facing the globe through an analysis and interpretation of current international events and what these events mean for the future.

ITCG - Industrial Technology - Computer Graphics

ITCG 102 - Graphic Arts I (3)

(2-2-3) A survey course covering the broad practices, techniques and problems of the graphic arts industry. Study and experience include history, design and layout, composition methods, image reproduction, screen process and bindery applications.

Corequisite: ITCG 102L

ITCG 202 - Graphic Arts II (3)

(2-2-3) An advanced course for students to apply the principles and competencies developed in the initial course. Units include automatic press operation (letterpress and offset), bindery operations and darkroom procedures for photography and photographic screen process applications to the graphic arts industry.

Prerequisite: ITCG 102

Corequisite: ITCG 202L

ITCG 302 - Offset Lithography (3)

(2-2-3) The study of the history and fundamentals of photo offset lithography in the graphic arts industry. Experience is achieved in copy (hot or cold type), darkroom procedures (line copy and halftone film developing), stripping/plate making, press operation, and other facets relating to the industry.

Corequisite: ITCG 302L

ITCG 303 - Computer Imaging and Illustration (3)

(2-2-3) A study of the principles, practices and techniques used in industry to illustrate complex mechanisms in pictorial form.

Prerequisite: ITCD 103 or ITCG 102

Corequisite: ITCG 303L

ITCG 322 - Electronic Imaging and Photography (2)

(2-2-3) Introductory course emphasizing the techniques and mechanics of photography as they apply to composition and darkroom procedures. Students will provide their own equipment and supplies (focusing camera, film and enlarging paper).

Corequisite: ITCG 322L

ITCG 350 - Electronic Composition I (3)

(2-2-3) An introductory course of theory and practical involvement relating to computer image generated type styles and sizes as indicated on a properly prepared layout of the job elements. The course will cover background of direct entry, VDT and newer machine principles as they are marketed and available to the graphic arts industry.

Corequisite: ITCG 350L

ITCG 351 - Graphic Duplication (2)

(2-2-3) A survey of the use of various methods and devices of the graphic arts currently used in the typical office or in-plant reproduction center. Experience will be gained in the preparation of direct and indirect methods of producing graphic images.

Prerequisite: ITCG 202

Corequisite: ITCG 351L

ITCG 450 - Electronic Composition II (3)

(2-2-3) A continuation of ITCG 350, concentrating on the advanced commands and intricate facets of computer image generated copy. A live job involvement to simulate an actual industrial experience in the classroom environment is the core of learning.

Prerequisite: ITCG 350

Corequisite: ITCG 450L

ITL - Italian

ITL 190 - Conversational Italian (3)

(3-0-3) An introduction to the Italian language and culture. Emphasis on correct pronunciation, rapid speech and fluency.

ITL 200 - Conversational Italian II (3)

(3-0-3) Emphasis on individual acquisition of correct, idiomatic Italian for communication.

LAT - Latin

LAT 101 - Beginning Latin I (3)

(3-0-3) Drill in the basic elements of Latin grammar, word study and reading of simple Latin selections.

LAT 102 - Beginning Latin II (3)

(3-0-3) A continuation of LAT 101.

Prerequisite: LAT 101

LAT 201 - Intermediate Latin I (3)

(3-0-3) Selections from Catullus, Cicero, Horace, Pliny, Martial, Livy and Ovid.

LAT 202 - Intermediate Latin II (3)

(3-0-3) Writings of Cicero, his life and influence.

LAT 301 - Advanced Latin I (3)

(3-0-3) Poets of the Augustan Age, together with the history of the period.

LAT 302 - Advanced Latin II (3)

(3-0-3) Further study of the poetry of the Augustan Age. Selections from Vergil's Aeneid.

LEAD - Leadership

LEAD 101 - Leadership I (1)

(1-0-1) This course focuses on the characteristics of leaders, types of power, habits of successful leaders and self-assessment involved in a study of leadership. There is an emphasis on civic engagement and leadership within a community.

LEAD 102 - Service to Society I (1)

(1-0-1) Exploration of leadership as a service to society through critical reflection on community service to populations in need. Integration of service experiences, course readings on justice, charity and contemporary society, and self-reflection on the obligations of service.

LEAD 201 - Leadership II (1)

(1-0-1) This course focuses on the analysis of historical concepts and contemporary theories of leadership. Emphasis on application of theoretical concepts to actual leadership situations.

LEAD 202 - Service to Society II (1)

(1-0-1) Apply leadership principles and critically think about leaders as servants to society through active participation in a civic engagement project. Integration of service experiences and course readings on principles related to developing the inner leader are accompanied by self-reflection on the obligations of service.

LEAD 301 - Leading Groups (1)

(1-0-1) Group theory, concepts, research and principles of application. Understanding how groups function. Development of skills necessary to lead and work effectively in groups through group exercises, civic engagement and experiential learning.

LEAD 302 - Leadership in Organizations (1)

(1-0-1) Focus on leadership theory and research within and across formal organization settings such as public/private and profit/nonprofit. Continue with group dynamics and explore the ethical use of power.

LEAD 401 - Advanced Leadership I (1)

(1-0-1) Focus on an intensive and integrative study of one or more leadership issues and an applied service-learning experience in a leadership role.

LEAD 402 - Advanced Leadership II (1)

(1-0-1) Focus on an intensive and integrative study of leadership in society, leadership self-assessment and an applied service-learning experience in a leadership role.

LGS - Legal Studies

LGS 200 - Law and Individual Rights (3)

(3-0-3) A critical study of civil and criminal laws relating to an individual's legal rights and responsibilities in the context of the larger community. This course satisfies the Level 3 Ethics and Civic Engagement SBS requirement for general education.

LGS 210 - Introduction to Law and Ethics (3)

(3-0-3) A study of law and the legal system, the responsibilities and ethics of the paralegal and the major elements of the legal studies program.

LGS 226 - Law for the Layperson (3)

(3-0-3) A study of practical criminal and civil law which every citizen should know; designed to provide an understanding of a person's legal rights and responsibilities, a knowledge of everyday legal problems, and the ability to analyze, evaluate and, in some instances, resolve simple legal disputes.

LGS 305 - Legal Reasoning (1-3)

(1 to 3 hrs.) This course introduces students to the elements of legal reasoning, which is the tool that lawyers and judges use to formulate logical arguments and arrive at justifiable decisions about the law. It involves a clear and precise use of language, deduction, induction, conditional logic, syllogism, analogy and other tools. The skills learned in this course should be valuable to students not only in their legal careers, but also in assessing arguments throughout their lives.

LGS 321 - Legal Research and Writing I (3)

(3-0-3) A study of primary and secondary legal authority, the proper form of citations and techniques for searching, validating and analyzing legal authority.

Prerequisite: LGS 210

LGS 325 - Pretrial Practice (3)

(3-0-3) An overview of the study of civil litigation, concentrating on the principles of litigation, the lawyer-client relationship, ethics, court organization, jurisdiction and introduction to the Rules of Civil Procedure and the Rules of Evidence as they pertain to the pleading and discovery stages of litigation with emphasis on drafting documents related to discovery; and studying the procedures utilized for gathering evidence and investigating cases.

Prerequisite: LGS 210 or simultaneous enrollment

LGS 332 - Property Law (3)

(3-0-3) A study of real and personal property with an emphasis on related forms, documents and procedures, including title examination and real estate transfers.

LGS 333 - Family Law (3)

(3-0-3) The main emphasis is the study of domestic law including modern divorce (marriage dissolution), annulments, antenuptial agreements, child support and custody, alimony, property division and related tax consequences. Also studied briefly are domestic and child abuse remedies, the rights of women and children, and juvenile court.

LGS 334 - Torts, Personal Injury Litigation and Insurance Law (3)

(3-0-3) A study of the law of torts with emphasis on forms, documents and procedures related to personal injury litigation and insurance claims.

LGS 335 - Contracts and the Uniform Commercial Code (3)

(3-0-3) A practical course in simple contract law and its evolution into modern day sales law under the Uniform Commercial Code. Additionally, the course studies other aspects of the Uniform Commercial Code such as secured transactions, creditor/debtor remedies, and negotiable instruments.

LGS 336 - Employment Law (3)

(3-0-3) A study of the law of labor and employment with an emphasis on theories, procedure, forms, and litigation related to the workplace.

LGS 337 - Corporate Law (3)

(3-0-3) The business corporation is the most versatile form of business association. This course studies the law of business corporations with an emphasis on related forms and documents.

LGS 340 - Criminal Law and Procedure (3)

(3-0-3) A study of the law of crimes against persons and property, defenses to prosecution and punishment, and of criminal procedure and evidence, with an emphasis on the Kentucky Penal Code and related forms and documents.

LGS 345 - Debtor/Creditor Relations (3)

(3-0-3) A practical course covering the law of debtor/creditor relations including creation of debt, collection of debt, and the remedies provided through bankruptcy law with a focus on remedies under Chapter 7 of the Bankruptcy Code.

LGS 355 - Administrative Law (3)

(3-0-3) A course that focuses on the practice and substantive law involving state and federal administrative agencies. Emphasis in evaluating, managing, and obtaining medical records useful to paralegals working in personal injury, workers compensation, social security disability, private/public disability and insurance/pension practice.

LGS 360 - Special Legal Topics (1-3)

(1 to 3 hrs.) A practice-oriented study of specialized areas of law not examined in the core curriculum which will emphasize the use of forms and documents. A different legal specialty will customarily be chosen each time the course is offered. May be repeated once for credit.

LGS 370 - History of American Law (3)

(3-0-3) This course is intended to provide students with the story of American law from its beginnings in the colonies to the present day. The course presents the achievements and failures of the American legal system in the context of America's commercial and working world, family practices, and attitudes toward property, government, crime, and justice.

LGS 380 - Global Legal Perspectives (1-3)

(1 to 3 hrs.) A comparative study of international law and policies including an education abroad component.

LGS 390 - Legal Studies Experiential Learning Lab (1)

(0-1-1) A hands-on experience allowing students to have a directed experience in the law to enable students to increase their capacity to contribute to their communities by making connections between past and current experiences. Instructor approval required.

LGS 400 - Law and Society Seminar (3)

(3-0-3) Critical examination of a focused topic in law and society in a seminar setting.

LGS 421 - Legal Research and Writing II (3)

(3-0-3) A study of the methods using legal authority to construct a written argument with an emphasis on legal writing style and drafting techniques.

Prerequisite: LGS 321

LGS 425 - Trial Practice (3)

(3-0-3) Continues the study of the techniques of civil litigation begun in LGS 325, emphasizing the Rules of Procedure and the Rules of Evidence during the trial and appeal stages of litigation, with emphasis on drafting documents related to the trial and appeal stages of civil litigation.

Prerequisite: LGS 325

LGS 436 - Wills, Trusts, and Estates (3)

(3-0-3) A study of the law and practice of wills, trusts and estate administration for the paralegal with particular emphasis on forms and documents.

LGS 476 - Special Problems in Legal Studies (1-3)

(1 to 3 hrs.) Original research project or readings in a particular subject area.

LGS 490 - Legal Studies Internship I (3-6)

(3 to 6 hrs.) The development and application of paralegal skills through a practicum requiring the student to work 120 hours under the direct supervision of an attorney in a law office or other appropriate legal environment. Instructor approval required.

LGS 495 - Legal Studies Internship II (1-3)

(1 to 3 hrs.) The continued development and application of advanced legal skills through a practicum requiring the student to work 40 hours for each credit hour under the supervision of an attorney in a law office or other appropriate legal environment. Instructor approval required.

Prerequisite: LGS 325

LGS 499C - Senior Paralegal Practice Seminar (3)

(3-0-3) This course covers electronic access to legal databases for retrieving and submitting court documents and information; tailoring forms to generate legal documents using new facts; analyzing and summarizing facts relevant to legal issues; using court rules to compute deadlines and perfect service of process; rules of professional conduct that commonly affect paralegals; communication skills for oral and written correspondence and job applications.

LSIM - Library Science

LSIM 101 - Use of Libraries (1)

(2-0-1) Introduction to the resources and services of Camden-Carroll Library including the online catalog, electronic databases, periodical literature, specialized reference sources and the Internet. Emphasis on skills and tools needed for research projects. Designed for college freshmen. Taught on a pass/fail basis (K-credit).

LSIM 201 - Living in an Information Society (3)

(3-0-3) A practical introduction to how information is created, organized, retrieved and evaluated in both electronic and print environments. Uses a concept-based approach and hands-on exercises to teach information retrieval, critical thinking and lifelong learning skills needed to live in a rapidly changing and technologically sophisticated society.

MATH - Mathematics

MATH 123 - Introduction to Statistics (3)

(3-0-3) Basic concepts of probability, sampling, and the algebra of events. Properties of selected discrete and continuous distributions. Students with an ACT Math subscore of 18 or below will take the corequisite version of this course (MATH 123E), which adds additional instructional support. The corequisite course (MATH 123E) meets five hours per week. This course satisfies the Level 1 core-mathematics requirement for general education.

Prerequisite: ACT Math score of 19 or higher, SAT Math score of 510 or higher, KYOTE College Readiness Mathematics score of 22 or higher, Accuplacer Next Generation Quantitative Reasoning, Algebra, and Statistics score of 237 or higher, or GED College Readiness Mathematics score of 165 or higher.

MATH 125 - Introduction to Biostatistics (3)

(3-0-3) An introduction to biostatistics to help students become more statistically literate. This course focuses on the foundational aspects of scientific analysis of health care data to answer health and wellness questions and solve problems. Students who master these concepts will be in a better position to read and understand research in order to make more informed decisions about health and wellness issues for self and others. The statistical concepts are presented within the context of the applications and calculations are performed by the instructor only to the extent needed in order to facilitate student understanding of how to use technology to obtain the needed analysis to answer questions. This course satisfies the Level 2 Knowledge NSC requirement for general education.

Prerequisite: ACT Math score of 19 or a "C" or better in MATH 090, MATH 091, or MATH 091C

MATH 131 - General Mathematics Problem Solving (3)

(3-0-3) A course providing the student with experiences designed to improve the ability to make decisions and solve a variety of problems. Emphasis is on learning to investigate, organize, observe, question, discuss, reason, generalize and validate. Mathematical content includes topics which are related to consumer mathematics, geometry, graphs, probability and statistics. Students with an ACT MATH subscore of 18 or below will take the enhanced/corequisite version of this course (MATH 131E), which adds additional instructional support. The enhanced/corequisite course (MATH 131E) meets five hours per week. This course satisfies the Level 1 core-mathematics requirement for general education.

Prerequisite: ACT Math score of 19 or higher, SAT Math score of 510 or higher, KYOTE College Readiness Mathematics score of 22 or higher, Accuplacer Next Generation Quantitative Reasoning, Algebra, and Statistics score of 237 or higher, or GED College Readiness Mathematics score of 165 or higher.

MATH 135 - Mathematics for Technical Students (3)

(3-0-3) Mathematics applied to technical programs. Modeling real world problems involving algebra, geometry and trigonometry; and quadratic, polynomial, exponential, logarithmic and trigonometric functions with applications to a variety of technical fields. Students with an ACT MATH subscore of 18 or below will take the enhanced/corequisite version of this course (MATH 135E), which adds additional instructional support. The enhanced/corequisite course (MATH 135E) meets five hours per week. This course satisfies the Level 1 core-mathematics requirement for general education.

Prerequisite: ACT Math score of 19 or higher, SAT Math score of 510 or higher, KYOTE College Readiness Mathematics score of 22 or higher, Accuplacer Next Generation Quantitative Reasoning, Algebra, and Statistics score of 237 or higher, or GED College Readiness Mathematics score of 165 or higher.

MATH 141 - Plane Trigonometry (3)

(3-0-3) Trigonometric functions, trigonometric identities, inverse functions and applications.

Prerequisite: One of the following: 1. ACT Math score of 22 or 2. MATH 152 or MATH 152E

MATH 152 - College Algebra (3)

(3-0-3) Field and order axioms; equations and inequalities; relations and functions; transformations and inverses of functions; polynomials, rational functions, exponentials, and logarithms; systems of linear and nonlinear equations. Students with an ACT MATH subscore of 21 or below will take the enhanced/corequisite version of this course (MATH 152E), which adds additional instructional support. The enhanced/corequisite course (MATH 152E) meets five hours per week. This course satisfies the Level 1 core-mathematics requirement for general education.

Prerequisite: ACT Math score of 22 or higher, SAT Math score of 540 or higher, KYOTE College Algebra score of 14 or higher, Accuplacer Next Generation Quantitative Reasoning, Algebra, and Statistics score of 263 or higher, ALEKS score of 46 or higher, GED College Readiness Mathematics score of 175 or higher, EdReady Diagnostic of 65 or higher, or high school GPA of 3.25 or higher.

MATH 160 - Mathematics for Business and Economics (4)

(4-0-4) An introduction to finite mathematics and calculus. Systems of linear equations and inequalities, matrix algebra, linear programming, differentiation and integration; applications to business and economics.

Prerequisite: 1. "C" or better in MATH 093 or MATH 093C or 2. ACT Math score of 20

MATH 170 - Introduction to Computer Science (4)

(3-2-4) An overview of modern computer science; mathematical treatment of algorithms; implementation of fundamental programming principles in a modern programming language; techniques of problem solving related to computing. Designed for students who have basic familiarity with Microsoft Office applications. Equates with CS 170.

Prerequisite: MATH 152 or ACT Math score of 22

Corequisite: MATH 170L

MATH 174 - Pre-Calculus Mathematics (3)

(3-0-3) Exponential, logarithmic and trigonometric functions; complex numbers, theory of equations. This course satisfies the Level 1 core-mathematics requirement for general education.

Prerequisite: One of the following: 1. "C" or better in MATH 141, MATH 152 or MATH 152E 2. ACT Math score of 24 or higher 3. SAT Math score of 580 or higher 4. KYOTE College Algebra score of 20 or higher 5. Accuplacer Next Generation Quantitative Reasoning, Algebra, and Statistics score of 276 or higher.

MATH 175 - Calculus I (4)

(4-0-4) Functions and graphs; limits; continuity; differentiation; applications of the derivative; integration; applications of the definite integral. This course satisfies the Level 1 core-mathematics requirement for general education.

Prerequisite: One of the following: 1. "C" or better in MATH 174 2. "C" or better in MATH 141 and MATH 152/152E 3. ACT Math score of 27 or higher 4. SAT Math score of 640 or higher 5. KYOTE Calculus score of 15 or higher 6. Accuplacer Next Generation Advanced Algebra and Functions score of 276 or higher

MATH 195 - Mathematical Communication I (1)

(1-0-1) An introduction to specific issues related to reading and writing mathematics. The focus is on written communication of mathematical concepts.

MATH 231 - Mathematics for the Elementary Teacher I (3)

(2-2-3) Number systems, primes and divisibility; fractions; decimals; real numbers; algebraic sentences. Designed for preservice teachers P-9.

Prerequisite: MATH 123 or higher and successful completion of a basic skills exam in mathematics as approved by the Department of Mathematics

Corequisite: MATH 231L

MATH 232 - Mathematics for the Elementary Teacher II (3)

(2-2-3) Introduction to probability and statistics; geometric shapes; geometry of measurement; congruence and similarity. Designed for preservice teachers P-9.

Prerequisite: MATH 231

Corequisite: MATH 232L

MATH 275 - Calculus II (4)

(4-0-4) Differentiation and integration of exponential, logarithmic, and trigonometric functions; techniques of integration; numerical methods; improper integrals, infinite series; polar coordinates.

Prerequisite: MATH 175

MATH 276 - Calculus III (4)

(4-0-4) Polar coordinates; parametric equations; vectors; differential calculus of functions of several variables; multiple integration; vector calculus.

Prerequisite: MATH 275

MATH 295 - Mathematical Communication II (1)

(1-0-1) An introduction to specific issues related to presenting mathematics. The focus is on oral communication of mathematical concepts.

Prerequisite: "C" or better in MATH 195

MATH 299 - Special Class (1-4)

(1 to 4 hrs.)

MATH 300 - Introduction to Mathematical Proofs (3)

(3-0-3) Propositional calculus; sets; relations; functions; Boolean algebras; cardinality, mathematical proofs.

Prerequisite: 1. MATH 141 and MATH 152 or 2. MATH 174, MATH 175, or MATH 275

MATH 301 - Elementary Linear Algebra (3)

(3-0-3) Vector spaces; determinants; matrices; linear transformations; eigenvectors.

Prerequisite: MATH 175

MATH 303 - Data Structures (3)

(3-0-3) Key concepts of data definitions, such as lists, stacks and queues. Recursion, graphs and trees, sorting and searching. Structured program design, elementary data structures and the study of algorithms as a tool of program design. Equates with CIS 303 and CS 303.

Prerequisite: CIS 205

MATH 305 - Business Statistics (3)

(3-0-3) The purpose of this course is to present key concepts from a non-calculus point of view in descriptive statistics, probability, discrete and continuous distributions, regression and correlation analysis and modeling, sampling distributions, confidence intervals and hypothesis tests for one and two population parameters, and one-way analysis of variance. Applications will focus on problems encountered in the world of business. Appropriate technology will be integrated throughout the course.

Prerequisite: MATH 123 or higher

MATH 308 - Discrete Mathematics (3)

(3-0-3) An introduction to the concepts of sets and functions, mathematical logic, and proof; elementary counting principles; recurrence relations and recurrence models; algorithmic efficiency; the fundamentals of graph theory.

Prerequisite: 1. MATH 170 and MATH 275 and 2. CS 303 or MATH 300

MATH 311 - Geometric Algebra (3)

(3-0-3) This course is designed as an introduction to linear and geometric algebra. Linear algebra topics include vectors, vector spaces, matrices, inner and outer products, eigenvectors, and linear transformations. Extending these ideas to higher-dimensional objects gives geometric algebra; topics include oriented areas and volumes, multivectors, the geometric product, blades, complex numbers and quaternions, the exterior product, and an introduction to other algebras.

Prerequisite: MATH 175 and either MATH 301 or instructor permission

MATH 312 - Numerical Methods (3)

(3-0-3) A basic course in numerical analysis, including error analysis, series approximation, numerical integration techniques, practical applications of matrices, solution of simultaneous nonlinear equations, and curve fitting.

Prerequisite: MATH 275

MATH 315 - Functions and Modeling (3)

(3-0-3) Students will engage in lab-based activities designed to strengthen and expand knowledge of the topics in secondary mathematics, focusing especially on topics from precalculus and the transition to calculus.

Students will explore a variety of contexts that can be modeled using families of functions, including linear, exponential, polynomial and trigonometric functions. Topics involving conic sections, parametric equations and polar equations will be included. Explorations will involve the use of multiple representations, transformations, data analysis techniques (such as curve fitting) and interconnections among geometry, probability, and algebra. Most labs will include significant use of various technologies, including computers, calculators and multimedia materials. The use of quantitative approaches (for example to rate of change, limits and accumulation) and building relationships between discrete and continuous reasoning will be recurrent themes. Equates with UTCH 315.

Prerequisite: MATH 175

MATH 320 - Information Theory and Codes (3)

(3-0-3) This course is designed as an introduction to information theory and coding theory. Topics include entropy, channel capacity, Shannon's Theorems, error-detecting and error correcting codes, maximum likelihood decoding, and an introduction to cryptography as time allows, including topics such as symmetric and public-key encryption, secrecy, security and cryptographic protocols. Specific applications of the material will be emphasized throughout the course.

Prerequisite: MATH 301

MATH 330 - Geometry for Teachers (P-9) (3)

(2-2-3) Experimental and axiomatic geometry; points, lines and planes; separations, curves and surfaces; congruence; measures; parallelism and similarity; coordinate geometry; transformations in a plane.

Prerequisite: MATH 232

Corequisite: MATH 330L

MATH 332 - Introduction to Finite Mathematics (3)

(3-0-3) Linear programming, combinatorial analysis, probability, matrices, game theory, and graph theory. Designed for preservice teachers P-9.

Prerequisite: MATH 152

MATH 335 - Problem Solving Seminar (3)

(3-0-3) The purpose of the course is to introduce students to advanced problem solving by participating in discussions, developing and comparing solution strategies, and challenge their understanding with practice exercises, puzzles, and more. Topics include algebra, generating functions and recurrence relations, real and complex analysis, and proof techniques.

Prerequisite: MATH 276 and MATH 300

MATH 340 - Financial Mathematics for Actuaries (3)

(3-0-3) This course is designed to prepare students for the Society of Actuaries Financial Mathematics exam. Topics include: time value of money, annuities, loans, bonds, and investments.

Prerequisite: "C" or better in MATH 275, FIN 360, and FIN 373.

MATH 345 - Probability for Actuaries I (3)

(3-0-3) This course is designed to prepare students for the Society of Actuaries Financial Mathematics exam. Topics include: laws of probability, conditional probability, independence, Bayes' theorem, discrete univariate random variables, measures of central tendency, measures of dispersion, and moment generating functions.

Prerequisite: "C" or better in MATH 275

Corequisite: MATH 276

MATH 346 - Probability for Actuaries II (3)

(3-0-3) This course is designed to prepare students for the Society of Actuaries Financial Mathematics exam. Topics include: continuous univariate probability distributions, joint density and distribution functions for multivariate distributions, central limit theorem, joint moment generating functions, variance for conditional and marginal distributions, covariance and correlation coefficients, order statistics, and linear combinations of independent variables.

Prerequisite: "C" or better in MATH 345

MATH 353 - Statistics (3)

(3-0-3) The purpose of this course is to present key concepts from a non-calculus point of view in descriptive statistics, probability, discrete and continuous distributions, regression and correlation analysis and modeling, sampling distributions, confidence intervals and hypothesis tests for one and two population parameters, and one-way analysis of variance. Applications will be in a wide variety of fields. Technology integration will be restricted to the ones used in the scientific community.

Prerequisite: MATH 123 or higher

MATH 355 - Operations Research (3)

(3-0-3) Linear, integer and dynamic programming, game theory and scheduling.

Prerequisite: MATH 170 and MATH 175

MATH 363 - Differential Equations (3)

(3-0-3) Special types of first order differential equations; linear differential equations; operator methods; Laplace transforms; series methods; applications.

Prerequisite: MATH 275

MATH 365 - Introduction to Mathematical Statistics (3)

(3-0-3) A calculus-based introduction to probability and statistics.

Prerequisite: MATH 275

MATH 370 - College Geometry I (3)

(3-0-3) Sets of axioms, finite geometries, convexity, Euclidean geometry of the polygon and circle, geometric constructions.

Prerequisite: MATH 300

MATH 371 - College Geometry II (3)

(3-0-3) Geometric transformations, non-Euclidean geometry, projective geometry, geometric topology, geometry of inversion.

Prerequisite: MATH 370

MATH 375 - Mathematics of Quantum Information (3)

(3-0-3) This course is an introduction to the theory of quantum information and computing. Topics include qubits, unitarity, quantum gates and circuits, entanglement, basic quantum algorithms, basic quantum error correction, and quantum key distribution. Previous exposure to quantum mechanics is not required.

Prerequisite: MATH 301

MATH 376 - Mathematics of Advanced Quantum Information (3)

(3-0-3) This course is a continuation of MATH 375 to more advanced topics in the theory of quantum information. Topics include advanced quantum algorithms, quantum error-correcting codes, quantum cryptographic protocols, and quantum computational complexity.

Prerequisite: MATH 375

MATH 385 - Mathematics in Business, Industry, and Government (3)

(3-0-3) Prepares mathematics and science students for careers in business, industry, government, and other organizations by engaging them in research problems that come directly from these entities. Course may be taken twice for credit.

MATH 389 - Honors Seminar (3)

(3-0-3) The course is designed for the liberal arts major. Topics may include the problem-solving strategies derived from studying games, number contemplation and computation, encryption systems, the mathematical

concept of infinity, applications in geometry, contortions of space, chaos and fractals, statistical thinking, probability, and various modes of mathematical decision making.

MATH 391 - Dynamics (3)

(3-0-3) A study of motion of bodies. Kinematics and dynamics of particles and rigid bodies; work and energy; impulse and momentum.

Prerequisite: PHYS 221 or PHYS 231

MATH 400 - Foundations of Computability (3)

(3-0-3) This course is an introduction to fundamental questions of computer science, mathematics and philosophy of mathematics. In particular, it is an analysis of the capabilities and limitations of computability, logic and mathematical proof. Topics include finite automata and regular languages, pushdown automata and context-free languages, the Church-Turing thesis, decidability and the Halting Problem, Gödel's Incompleteness Theorems, the Axiom of Choice and some variants and an introduction to complexity classes and NP-completeness.

Prerequisite: MATH 170 and MATH 300

MATH 404 - Topology (3)

(3-0-3) Elementary set theory; topological spaces; metric spaces; compactness and connectedness; mappings of topological spaces and related topics.

Prerequisite: MATH 275 and MATH 300

MATH 410 - Introduction to Real Analysis (3)

(3-0-3) Algebraic and topological properties of the reals; limits and continuity; differentiation; infinite series; Riemann integration.

Prerequisite: MATH 275 and MATH 300

MATH 412 - Real Variables (3)

(3-0-3) Topological properties of Euclidean space; theory of differentiation and integration; sequences and series of functions.

Prerequisite: MATH 410

MATH 414 - Functional Analysis (3)

(3-0-3) Linear spaces; normed and branched spaces; Hilbert spaces; applications to sequence spaces; and Fourier series.

Prerequisite: MATH 301 and MATH 412

MATH 419 - Probability (3)

(3-0-3) A course in mathematical probability and its applications to statistical analysis.

Prerequisite: MATH 365

MATH 420 - Mathematical Statistics (3)

(3-0-3) Hypothesis testing and estimation; bivariate and multivariate distributions; order statistics; test of fit; nonparametric comparison of locations; distribution theory.

Prerequisite: MATH 419

MATH 425 - Number Theory (3)

(3-0-3) This course is an introduction to elementary number theory. Topics include some of part of: Primes, Divisibility and the Fundamental Theorem of Arithmetic, Greatest Common Divisor (GCD), Euclidean Algorithm, Congruences, Chinese Remainder Theorem, Hensel's Lemma, Primitive Roots, Quadratic Residues and Reciprocity, Arithmetic Functions, Diophantine Equations, Continues Fractions, etc.

Prerequisite: MATH 300

MATH 442 - Advanced Mathematical Modeling (3)

(3-0-3) Discrete models across a variety of biological subdisciplines. Topics include linear and nonlinear models of population; Markov models of molecular evolution; phylogenetic tree construction; and infectious disease models.

Prerequisite: MATH 363

MATH 450 - Modern Algebra (3)

(3-0-3) Groups, rings, integral domains and related topics.

Prerequisite: MATH 300

MATH 453 - Concepts in the Design of Experiments (3)

(3-0-3) Single factor experiments; factorial experiments; qualitative and quantitative factors; fixed, random and mixed models; nested experiments.

Prerequisite: MATH 305, MATH 353, or MATH 365

MATH 455 - Linear Statistical Models (3)

(3-0-3) Linear and quadratic regression models; least squares estimates; statistical inference; multicollinearity; residual analysis; selection of regression models; lack of fit.

Prerequisite: MATH 305, MATH 353, or MATH 365

MATH 456 - Nonparametric Statistics (3)

(3-0-3) A course in basic nonparametric methods with applications.

Prerequisite: MATH 305, MATH 353, or MATH 365

MATH 460 - Differential Geometry (3)

(3-0-3) This course is designed to introduce differential geometry. Topics include curves and surfaces, extrinsic curvature, manifolds, tensors, exterior algebra, metrics, covariant derivatives, connections, intrinsic curvature, and the Riemann tensor. Additional topics include the Euler characteristic, Lie groups, electromagnetism, and general relativity as time allows.

Prerequisite: MATH 276 and either MATH 301 or MATH 311

MATH 463 - Partial Differential Equations (3)

(3-0-3) An introductory course in partial differential equations. Topics include partial differential equations of first and second order and applications.

Prerequisite: MATH 276 and MATH 363

MATH 473 - Projective Geometry (3)

(3-0-3) A synthetic treatment of projective geometry; conics; axiomatic projective geometry; and some descendants of real projective geometry.

Prerequisite: MATH 370

MATH 476 - Special Problems (1-6)

(1 to 6 hrs.)

MATH 481 - Mathematics for Scientists and Engineers (3)

(3-0-3) Fourier series, ordinary and partial differential equations, special functions and integral transforms. Equates with PHYS 481.

Prerequisite: MATH 276 and MATH 363

MATH 485 - Vector Analysis (3)

(3-0-3) Vector algebra; vector functions of a single variable; scalar and vector fields; line integrals; generalizations and applications.

Prerequisite: MATH 276 and MATH 300

MATH 486 - Complex Variables (3)

(3-0-3) Algebra of complex variables; analytic functions, integrals; power series; residues and poles; conformal mappings.

Prerequisite: MATH 276 and MATH 300

MATH 495 - Topics in the Mathematics Curriculum (1-6)

(1 to 6 hrs.) New curricula developments in mathematics.

MATH 499C - Capstone and Senior Thesis I (2)

(2-0-2) Designed to give the student an introduction to research and literature in mathematics, computer science or physics. This course equates with CS 499C and PHYS 499C. Prior to registration for this course, students must file a Thesis Proposal Form in the Mathematics department office.

MATH 499D - Capstone and Senior Thesis II (1)

(1-0-1) A formal report that includes the basic literature search and appropriate original work will be prepared in a form suitable for submission to a scientific journal. A technical oral presentation of the research will be made to the department. In addition, an oral or poster presentation at a local, state, regional or national meeting will be required.

Prerequisite: MATH 499C

MKT - Marketing

MKT 200 - The ABC's of Marketing (3)

(3-0-3) This course explores the role of marketing in society, with an emphasis on class discussion. The ABC's are three segments of content: a history of the evolution of marketing's role in society, best marketing practices to promote business success and changing marketplace: contemporary marketing topics. Specific topics discussed will include green marketing, social media and technology, ethics and social responsibility, stealth and guerrilla marketing, branding, customer satisfaction and loyalty, value creation, advertising and regulations, cause and social marketing.

MKT 204 - Marketing (3)

(3-0-3) The basic principles of marketing and the impact of globalization, diversity, ethics and small business marketing. An understanding of how the elements of the marketing mix (product, price, place and promotion) are used to create superior value for customers and achieve organizational objectives.

MKT 325 - Marketing Ethics and Social Responsibility (3)

(3-0-3) This course will examine ethical theories and reasoning as a foundation for managerial decision-making, each addressed from the marketing perspective. Discussion will focus on how moral standards are applied to marketing decisions, behaviors and institutions. Topics will evaluate direction and meaning to problems in marketing ethics through reflection on concepts such as individual choice, freedom and responsibility, desire satisfaction, non-coercive exchanges, and instrumental efficiency.

Prerequisite: MKT 204 and MNGT 201

MKT 339 - Cooperative Education III (1-8)

(1 to 8 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a junior level status. Maximum of three hours of cooperative education credit (MKT 339/439) available for track credit.

MKT 340 - E-Marketing and Social Networking (3)

(3-0-3) This course examines emerging interactive technologies and their impact on and implications for marketing strategy in the online environment including, but not limited to, the growing number of social networks as consumer communication vehicles.

Prerequisite: MKT 204

MKT 345 - Marketing Strategies for Small Business (3)

(3-0-3) Examines the marketing methods used by small to medium-sized companies operating with limited budgets. The class will explore the formulation of a marketing plan. In addition, pricing, distribution and promotion issues for the small business will be investigated.

Prerequisite: MKT 204

MKT 350 - Professional Selling (3)

(3-0-3) The major promotional method used in American business, personal selling, involves person-to-person communication between a buyer and seller. The stages of the selling process, such as prospecting, the presentation and the close will be explored.

Prerequisite: MKT 204

MKT 354 - Consumer Behavior (3)

(3-0-3) Examines the processes consumers use to pick, secure, use and dispose of products and services. In addition, internal forces such as personality, and external forces such as culture, which impact the decision-making process, are reviewed.

Prerequisite: MKT 204

MKT 365 - Services and Relationship Marketing (3)

(3-0-3) This course examines the marketing of services from a managerial perspective. Includes topics such as the unique and tangible nature of services; managing the service encounter; pricing, promoting and distribution of services. Developing skills and techniques for excellent service quality and customer relationship management (CRM) have become increasingly important to the retention of customers and key to the success of service industries.

Prerequisite: MKT 204

MKT 375 - Sustainable Marketing (3)

(3-0-3) This course addresses ecological issues facing society and modern marketing professionals. Course discussion will include green marketing, environmental responsibility, consumer attitudes and consumption, and providing value to customers via sustainable marketing strategies.

Prerequisite: MKT 204

MKT 380 - Corporate Marketing Strategies (3)

(3-0-3) This course examines the world of corporate marketing and emphasizes the importance of businesses interacting effectively with their stakeholders. Timely, and ongoing information exchange, as well as building cooperative relationships between other businesses, the media, investors and government form the basis of this course. Additionally, this course examines the important area of crisis management.

Prerequisite: MKT 204

MKT 399 - Special Class (1-4)

(1 to 4 hrs.) Workshops on various marketing subjects will be presented periodically to supplement the basic course offerings in marketing. Credit toward degree programs must be approved by the student's advisor.

MKT 439 - Cooperative Education IV (1-8)

(1 to 8 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a senior level status. Maximum of three hours of cooperative education credit (MKT 339/439) available for option credit.

MKT 451 - Retail Marketing (3)

(3-0-3) The role of retailing institutions to meet the fast-paced changes in society which confront final consumers in their purchases for personal, family, or household non-business uses. The retailing process is critically analyzed along with the environment within which it operates, and the institutions and functions that are performed.

Prerequisite: MKT 204

MKT 452 - Marketing Research and Analysis (3)

(3-0-3) Marketing research is used by a wide variety of organizations to collect information that will assist them in making better decisions. The

process of designing, gathering, analyzing and reporting data relevant to a specific decision will be explored.

Prerequisite: MKT 204 and MATH 305

MKT 454 - Integrated Market Communication (3)

(3-0-3) Required for marketing track in business administration. Promotional strategies are dedicated to demonstrating how organizations may communicate, compete and convince their target markets through the interrelationship of advertising, sales promotion, publicity and public relations.

Prerequisite: MKT 204

MKT 455 - Advertising Principles and Processes (3)

(3-0-3) A discussion of the milestones in the evolution of advertising and a description of advertising's role in the marketing communication process. The course will investigate both the client and professional advertiser perspective. Theory and application are stressed.

Prerequisite: MKT 204

MKT 469 - International Marketing (3)

(3-0-3) The role of the United States in the competitive arena of world trade. Preparing students to operate and compete globally; how to find new markets to replace saturated markets, how to determine which products international customers want, how to customize products for these demands, how to best reach these customers, what pricing strategies are most appropriate, what distribution channels are adequate, and how to overcome barriers that hinder implementation of marketing programs. Equates with IST 469.

Prerequisite: MKT 204

MKT 476 - Special Problems in Marketing (1-3)

(1 to 3 hrs.) Self-directed independent study on a specific problem, based on written proposal and justification submitted by student prior to registration. Each request will be considered on its own merit in relation to the special needs, interest and abilities of the student.

Prerequisite: Senior standing and consent of associate dean

MKT 495 - Marketing Strategies (3)

(3-0-3) An integrated course in marketing, systematically oriented with emphasis on the marketing mix, the formulation of competitive strategies, and special attention to market analysis, marketing information, and sales forecasting.

Prerequisite: MKT 204, MNGT 201, and completion of or concurrent enrollment in MKT 354, MKT 365, and MKT 452, or consent of instructor

MKT 499 - Selected Workshop Topics (1-4)

(1 to 4 hrs.) Workshops on various marketing subjects will be presented periodically to supplement the basic course offerings in marketing. Credit toward degree programs must be approved by the student's advisor.

MNGT - Management

MNGT 101 - Reel Business (3)

(3-0-3) Using depictions from various films, this course explores how popular culture has portrayed a variety of business issues including management, employees, ethics, gender and diversity in the workplace, the social responsibility of business, career development and the dynamics of organizational life. Particular emphasis is given to how and why society's images of business have evolved throughout history.

MNGT 160 - Business and Society (3)

(3-0-3) A basic introductory course designed to expose students to a variety of issues regarding management, marketing, finance, accounting, economics, technology and business law. Through this course, students will develop an understanding and an appreciation of the interaction between the world of business and society.

MNGT 199 - Special Class (1-4)

(1 to 4 hrs.) Workshops on various management subjects will be presented periodically to supplement the basic course offerings in management. Credit toward degree programs must be approved by the student's advisor.

MNGT 201 - Principles of Management (3)

(3-0-3) History of management, the management process, the principles of management and application in the operations of business. The fundamental concepts of management applied to such areas of business activity as organization, personnel, production and research.

MNGT 310 - Small Business Organization (3)

(3-0-3) Aspects of management that are unique to small firms; economic and social environment in which small firms function; student practice in making decisions on problems facing managers of small businesses.

MNGT 311 - Human Resource Management (3)

(3-0-3) Personnel management principles; job requirements; selection techniques; testing programs; facilitation of employee adjustment; wage and salary administration; legal aspects of labor relations; financial incentives.

Prerequisite: MNGT 201

MNGT 315 - Family Business (3)

(3-0-3) The course investigates the unique characteristics that allow family businesses to create inimitable competitive advantages that result in their outperformance of non-family businesses. The course is designed to explore issues and risks which lie at the intersection of ownership, control, and management of family businesses and the practices necessary to ensure effective optimization of all of the family business subsystems for the long-term benefit of the family business. The experiences of many families will be brought to bear on issues of family control, non-family management, next-generation talent and development, estate and tax planning, wealth management concerns, philanthropy and family business financing.

MNGT 320 - Social Entrepreneurship (3)

(3-0-3) This course offers an overview of selected concepts, theories, and perspectives of social entrepreneurship that social innovators need to increase the likelihood of success in social entrepreneurial activities. The course presents fundamentals in venture planning and development, as well as an introduction to both traditional and emerging capitalization strategies such as philanthropy, government funding, and venture capital, microfinance, and competition prizes.

MNGT 339 - Cooperative Education III (1-8)

(1 to 8 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a junior level status. Maximum of three hours of cooperative education credit (MNGT 339/439) available for option credit.

MNGT 355 - Business Innovation and Creativity (3)

(3-0-3) This course will examine the importance of innovation within the entrepreneurial process from a corporate, product/process, social and sustainability perspective. Students will be introduced to the concepts of opportunity recognition and innovation management as a catalyst for value creation within the entrepreneurial venture. In addition, students will gain a better appreciation of the importance of businesses that create and support a climate of creativity to allow for and further the expansion of an on-going innovative culture.

Prerequisite: BBA 200 and MNGT 201

MNGT 362 - The Legal Environment and Business Practices (3)

(3-0-3) Business practices, emphasizing legal problem avoidance. Areas of the law which impact business success or failure; the Uniform Commercial Code, state and federal regulations and laws.

Prerequisite: BBA 261

MNGT 365 - Financial Issues for Small Business (3)

(3-0-3) Examines the financial issues small businesses deal with at start-up, and on a day-to-day basis. Students will learn how small businesses can apply financial principles to benefit the company. Equates with FIN 365.

Prerequisite: FIN 360

MNGT 399 - Special Class (1-4)

(1 to 4 hrs.) Workshops on various management subjects will be presented periodically to supplement the basic course offerings in management. Credit toward degree programs must be approved by the student's advisor.

MNGT 401 - Health Care Law and Policy (3)

(3-0-3) This is a survey of the law and policy of health care, covering the history of health care law and policy, the fundamental principles of law as applied to health care, and the federal and state legislation and regulations related to health care.

Prerequisite: MNGT 201

MNGT 409 - International Management (3)

(3-0-3) A global view of management within various cultures and countries. The course covers international competition, cross-national ethics, international strategy, cross-cultural management, international human resources and international leadership. Equates with IST 409.

Prerequisite: MNGT 201

MNGT 411 - Labor Relations (3)

(3-0-3) Historical development of the U.S. labor movement and a comparative analysis with other Western culture labor movements. Emphasis on developing insights into labor's point of view. An introduction to labor-management negotiations and grievance procedures.

Prerequisite: MNGT 311

MNGT 417 - Management and Marketing of Public and Nonprofit Organizations (3)

(3-0-3) The application of principles of management and marketing to the specific needs of public and nonprofit organizations. Formulation, implementation and evaluation strategies for management and marketing of these organizations are explored.

Prerequisite: MKT 204 and MNGT 201

MNGT 420 - New Venture Creations (3)

(3-0-3) Examines the issues small businesses deal with at start-up and on a day-to-day basis. Students will learn the steps necessary to start a small business.

Prerequisite: MNGT 365 and MKT 345

MNGT 425 - Training and Development in Industry (3)

(3-0-3) Study of the relevant theories, issues, trends and methods in training and developing adult learners in work organizations; includes program design, needs and task analysis, delivery methods, working with consultants and program evaluations. Equates with BIS 425.

Prerequisite: BBA 295 and MNGT 201

MNGT 436 - Decision-Making and Project Management (3)

(3-0-3) Presents a decision-making framework that allows students to explore and weigh three critical elements of formulating solutions for unstructured problems; root cause analysis, option analysis, and risk analysis. Also presents project management concepts to deal with the implementation of decisions and plans.

Prerequisite: BBA 370

MNGT 439 - Cooperative Education IV (1-8)

(1 to 8 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a senior level course. Maximum of three-hours of cooperative education credit (MNGT 339/439) available for track credit.

MNGT 450 - Supply Chain Management (3)

(3-0-3) This course is designed to provide a basic understanding of the role of the various entities in managing the supply chain, the inter-relatedness of critical activities, and a strategic view of the importance of supply chain management to firms. In this course, students will gain an understanding of the definition and scope of supply chain management and an appreciation of the potential for businesses to improve bottom-line performance through an integrated, strategic approach to the management of their supply chains.

MNGT 465 - Organizational Behavior (3)

(3-0-3) A study of human and interpersonal behavior critical to understanding, evaluating, and appraising business and social situations. Emphasis on skill and the ability to work with people, groups and institutions.

Prerequisite: MNGT 201

MNGT 476 - Special Problems in Management (1-3)

(1 to 3 hrs.) Self-directed independent study on a specific problem, based on written proposal and justification submitted by student prior to registration. Each request will be considered on its own merit in relation to the special needs, interest and abilities of the student.

Prerequisite: Senior standing and consent of associate dean

MNGT 486 - Management Internship Program (3-12)

(3 to 12 hrs.) The internship program involves placement of students in positions in business comparable to those filled by professional career employees. Participants work under the supervision of high-level officials possessing major departmental responsibilities. Available as track credit.

MS - Military Science

MS 101 - Introduction to Military Science (2)

(2-0-2) Make your first new peer group at college one committed to performing well and enjoying the experience. Increase self-confidence through team study and activities in basic drill, physical fitness, rappelling, leadership reaction course, first aid, making presentations and basic marksmanship. Learn fundamental concepts of leadership in a profession in both classroom and outdoor laboratory environments. Participation in a weekend exercise is optional, but highly encouraged.

MS 101A - Leadership Laboratory (1)

(0-2-1) Only open to (and required of) students in the associated military science course. Series with different roles for students at different levels in the program. Learn and practice basic skills, gain insight into advanced course in order to make an informed decision whether to apply for it. Build self-confidence and team building leadership skills that can be applied throughout life.

MS 102 - Introduction to Leadership (2)

(2-0-2) Learn/apply principles of effective leading. Reinforce self-confidence through participation in physically and mentally challenging exercises with upper division ROTC students. Develop communication skills to improve individual performance and group interaction. Relate

organizational ethical values to the effectiveness of a leader. Participation in weekend exercise is optional, but highly encouraged.

MS 102A - Leadership Lab (1)

(0-2-1) Only open to (and required of) students in the associated military science course. Series with different roles for students at different levels in the program. Learn and practice basic skills. Gain insight into advanced course in order to make an informed decision whether to apply for it. Build self-confidence and team building leadership skills that can be applied throughout life.

Corequisite: MS 102

MS 201 - Self-Team Development (2)

(2-0-2) Learn/apply ethics-based leadership skills that develop individual abilities and contribute to the building of effective teams of people. Develop skills in oral presentations, writing concisely, planning of events, coordination of group efforts, advanced first aid, land navigation and basic military tactics. Learn fundamentals of ROTC's Leadership Assessment Program. Participation in a weekend exercise is optional, but highly encouraged.

Corequisite: MS 201A

MS 201A - Leadership Laboratory (1)

(0-2-1) Only open (and required of) students in the associated military science course. Series with different roles for students at different levels in the program. Learn and practice basic skills. Gain insight into advanced course in order to make an informed decision whether to apply for it. Build self-confidence and team building leadership skills that can be applied throughout life.

Corequisite: MS 201

MS 202 - Individual/Team Military Tactics (2)

(2-0-2) Introduction to individual and team aspects of military tactics in small unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety/security, and methods of pre-execution checks. Practical exercise with upper division ROTC students. Learn techniques for training others as an aspect of continued leadership development. Participation in a weekend exercise is optional, but highly encouraged.

Corequisite: MS 202A

MS 202A - Leadership Laboratory (1)

(0-2-1) Only open to (and required of) students in the associated military science course. Series with different roles for students at different levels in the program. Learn and practice basic skills. Gain insight into advanced course in order to make an informed decision whether to apply for it. Build self-confidence and team building leadership skills that can be applied throughout life.

Corequisite: MS 202

MS 301 - Leading Small Organizations I (2)

(2-0-2) Series of practical opportunities to lead small groups, receive personal assessment and encouragement, and lead again in situations of increasing complexity. Uses small unit tactics and opportunities to plan and conduct training for lower division students both to develop such skills and as vehicles for practicing leading. Two hours and a required leadership lab, MS 301A, plus required participation in three one-hour sessions for physical fitness. Participation in one weekend exercise is also required, and one or two more weekend exercises may be offered for optional participation.

Corequisite: MS 301A

MS 301A - Advanced Leadership Laboratory (1)

(0-2-1) Open only to students in the associated military science course. Series with different roles for students at different levels in the program. Involves leadership responsibilities for the planning, coordination, execution, and evaluation of various training and activities with basic course students and for the ROTC program as a whole. Students develop, practice and refine leadership skills by serving and being evaluated in a variety of responsible positions.

Corequisite: MS 301

MS 302 - Leading Small Organizations II (2)

(2-0-2) Continues methodology of MS 301. Analyze tasks; prepare written or oral guidance for team members to accomplish task. Delegate tasks and supervise. Plan for and adapt to the unexpected in organization under stress. Examine and apply lessons from leadership case studies. Examine importance of ethical decision making in setting a positive climate that enhances team performance. Two hours and required leadership lab, MS 302A, plus required participation in three one-hour sessions for physical fitness. Participation in one weekend exercise is also required, and one or two more weekend exercises may be offered for optional participation.

Corequisite: MS 302A

MS 302A - Advanced Leadership Laboratory (1)

(0-2-1) Open only to students in the associated military science course. Series with different roles for students at different levels in the program. Involves leadership responsibilities for the planning, coordination, execution, and evaluation of various training and activities with basic course students and for the ROTC program as a whole. Students develop, practice and refine leadership skills by serving and being evaluated in a variety of responsible positions.

Corequisite: MS 302

MS 339 - Cooperative Education in Military Leadership (4)

(0-0-4) Attendance at ROTC Advanced Summer Camp. (Six weeks in duration.)

MS 401 - Leadership Challenges and Goal Setting (2)

(2-0-2) Plan, conduct and evaluate activities of the ROTC cadet organization. Articulate goals, put plans into action to attain them. Assess organizational cohesion and develop strategies to improve it. Develop confidence in skills to lead people and manage resources. Learn/apply various Army policies and programs in this effort. Two hours and a required leadership lab, MS 401A, plus required participation in three one-hour sessions for physical fitness. Participation in one weekend exercise is also required, and one or two more weekend exercises may be offered for optional participation.

Corequisite: MS 401A

MS 401A - Advanced Leadership Laboratory (1)

(0-2-1) Open only to students in the associated military science course. Series with different roles for students at different levels in the program. Involves leadership responsibilities for the planning, coordination, execution and evaluation of various training and activities with basic course students and for the ROTC program as a whole. Students develop, practice and refine leadership skills by serving and being evaluated in a variety of responsible positions.

Corequisite: MS 401

MS 402 - Transition to Lieutenant (2)

(2-0-2) Continues the methodology from MS 401. Identify and resolve ethical dilemmas. Refine counseling and motivating techniques. Examine aspects of tradition and law as related to leading as an officer in the United States Army. Prepare for the future as a successful Army lieutenant. Two hours and a required leadership lab, plus required participation in three

one-hour sessions for physical fitness. Participation in one weekend exercise is also required, and one or two more weekend exercises may be offered for optional participation.

Corequisite: MS 402A

MS 402A - Advanced Leadership Laboratory (1)

(0-2-1) Open only to students in the associated military science course. Series with different roles for students at different levels in the program. Involves leadership responsibilities for the planning, coordination, execution, and evaluation of various training and activities with basic course students and for the ROTC program as a whole. Students develop, practice and refine leadership skills by serving and being evaluated in a variety of responsible positions.

Corequisite: MS 402

MS 476 - Military Science Workshop (3)

(3-0-3) The workshop format is an interactive learning experience designed to build and/or improve specific skills in military science. A maximum of six semester hours with different workshop topics may be earned under this course number.

MSU - University Studies

MSU 099 - Learning for Success (1)

(1-0-1) This course is required for students who are readmitted by the Academic Standards and Appeals Committee. This course is designed to assist students with positive learning experiences to enhance academic success.

MSU 101 - Discovering University Life (1)

(1-0-1) This course is designed to support new students in making the academic, personal, and social adjustments needed for a successful University experience.

MSU 109 - Critical Reading (3)

(3-0-3) This college level course emphasizes the development of analytical reading skills. Using writings from a variety of subject areas, students will learn how to recognize what a text means by analyzing content, language, and structure. Students will also learn how to identify the author's assumptions and perspective. Vocabulary development and the improvement of reading speed while maintaining comprehension are also components of this course. The outcome of this course is for students to think critically about any texts they read.

MSU 115 - Civic and Regional Engagement (3)

(3-0-3) A study of the importance of civic and regional engagement to a healthy democracy, particularly at the state and local levels. Students will learn how to study the problems facing their communities, and how public policy is formulated and implemented.

Prerequisite: Admission to the Craft Academy.

MSU 125 - Creative Encounters in Visual Art (3)

(3-0-3) Students will work creatively with two-dimensional and three-dimensional art media and materials to generate ideas, explore possibilities and give physical form to their expressions. Traditional and contemporary aesthetic theory and practice in the visual arts will be examined.

Prerequisite: Admission to the Craft Academy.

MSU 135 - Chocolate and Entrepreneurship (3)

(3-0-3) Chocolate! Undeniably delicious! It is also big business! This +X course (focusing on entrepreneurship) will actively engage students in entrepreneurship by allowing them to explore the companies that make delightful sweets. There is more to a chocolate company than sweetness: survival of the fittest in a global, diverse and dynamic market takes a lot of survival tools. As a result, students will learn how to apply these company survival tools to their own lives to create their own success. Students will create a chocolate product, make a business plan for the product they design, and market this product.

Prerequisite: Admission to the Craft Academy.

MSU 176 - Craft International Experience (3)

(3-0-3) This course provides a guided study of STEM+X areas in select countries and how STEM is directly impacted by STEM+X. Students will either travel abroad in a culminating trip to select countries or will elect to complete an intensive research project on same countries visited. Students will compare similarities and differences in common international problems in search of solutions in STEM areas. Students will gain a deeper understanding into strategies and innovative ways to solve real world problems through inventions, research and critical thinking.

Prerequisite: Admission to the Craft Academy

MSU 339 - Cooperative Education (1-8)

(1 to 8 hrs.) A total of eight hours may be applied to the degree. Competency-based practical/work experiences designed to integrate theoretical aspects of education with practical aspects of work experience in an organized and supervised fashion. Student must have consent of instructor prior to registration.

MSU 399 - Selected Topics/Workshop (1-3)

(1 to 3 hrs.) Courses/workshops on various subjects frequently utilizing innovative, experimental or hands-on techniques to supplement regular curricular offerings. Credit toward the degree must be approved by student's advisor and department chair.

MSU 400 - The World of Work (1)

(2-0-1) Development of skills in self-assessment, researching companies, locating job opportunities, writing job search documents and conducting a personalized job campaign.

MSU 476 - Special Problems (1-3)

(1 to 3 hrs.) Designed for the purpose of permitting a student to do advanced work/research as a continuation of an earlier experience or to work in an area of special interest. Self-directed independent study based on a written proposal and justification submitted prior to the beginning of the semester. Student must have approval from the instructor prior to registration. Each request considered separately.

MSU 499C - Senior Seminar (3)

(3-0-3) An integrative course designed to forge an interdisciplinary learning experience centered around a relevant contemporary issue and to culminate the undergraduate experience by preparing for post-college life. This course satisfies the integrative component for general education.

Prerequisite: Open only to seniors pursuing a Bachelor of University Studies degree

MUSC - Music Conducting

MUSC 271 - Basic Conducting (2)

(2-0-2) Fundamentals of score reading and baton technique.

MUSC 471 - Choral Conducting (2)

(2-0-2) Baton technique, rehearsal procedures, choral diction and style and interpretation of choral works.

Prerequisite: MUSC 271

MUSC 472 - Instrumental Conducting (2)

(2-0-2) Baton technique, rehearsal procedures and style and interpretation of instrumental works.

Prerequisite: MUSC 271

MUSC 473 - Rehearsal Techniques for Jazz Ensembles (2)

(2-0-2) Special techniques needed in rehearsing jazz, pop and rock ensembles.

Prerequisite: MUSC 271

MUSE - Music Education

MUSE 207 - Foundations of Music Education (3)

(3-0-3) Orientation for students considering music teaching as a career. Course will introduce the history of music education in the public schools while including the philosophic, political and social foundations of teaching in the public schools. Field experiences are an integral part of the course. Required for admission into the Teacher Education Program (TEP).

MUSE 215 - Microcomputers and Music (3)

(3-0-3) Students must be able to read music in all clefs. Applications of microcomputers in music. An introduction to the current usage, implementation and software.

MUSE 222 - Music for the Elementary Teachers (3)

(3-0-3) Rudiments of music theory and methods for teaching music to elementary school children.

MUSE 325 - Materials and Methods for Elementary Grades (3)

(2-3-3) Materials and methods for the elementary school with emphasis on the teaching of musical concepts through developmental techniques.

Prerequisite: MUSE 207

MUSE 335 - Field Experience (1-3)

(1 to 3 hrs.) Two full days weekly of teaching under supervision in public schools in nearby communities.

MUSE 336 - Field Experience (1-3)

(1 to 3 hrs.) Continuation of MUSE 335.

MUSE 375 - Vocal Materials and Methods (3)

(3-0-3) Instructional procedures and materials used in vocal teaching from the elementary grades through high school.

Prerequisite: MUSE 207

MUSE 376 - Instrumental Materials and Methods (3)

(3-0-3) Instructional procedures and materials used in instrumental teaching from the elementary grades through high school.

Prerequisite: MUSE 207

MUSE 378 - Keyboard Pedagogy (2)

(2-1-2) Survey and evaluation of materials and methods for teaching class and private piano.

MUSE 415 - Voice Pedagogy (3)

(3-0-3) An introduction to the physiological, acoustical and phonetic bases of singing and private voice instruction. Emphasis on the relationship between scientific fact and the practical application of principle through the use of imagery and phonetic choice.

MUSE 416 - Vocal Pedagogy for the Music Educator (2)

(2-0-2) This course will acquaint the music education major with the structure, function and development of the vocal mechanism. Students will learn how to protect and develop the vocal instrument in individual and group instructional settings. Topics include the physiology of the singing voice, basics of singing, acoustics, characteristics of voices at various developmental stages, vocal health, teaching singing in individual and group settings, choosing repertoire to support the development of the vocal instrument, assessing results and nurturing musical artistry.

Prerequisite: MUSE 207

MUSE 458 - Percussion Pedagogy (2)

(2-0-2) A study of the development of percussion instruments, literature and performing techniques.

MUSE 479 - Marching Band Techniques (2)

(2-0-2) Techniques of preparing marching bands for performance.

MUSG - Music Class Applied

MUSG 123 - Class Piano I (1)

(0-2-1)

MUSG 124 - Class Piano II (1)

(0-2-1)

Prerequisite: MUSG 123

MUSG 125 - Score Reading (1)

(0-2-1) This course improves students' ability to sight-read scores efficiently at the piano. Scores will include solo piano and vocal music with piano accompaniment from the Baroque to modern periods, as well as four-part hymns and open scores up to four staves. This course will prepare students for future ensemble playing,conducting and arranging. This course may be repeated for credit.

MUSG 135 - Class Guitar I (1)

(0-2-1)

MUSG 136 - Class Classical Guitar (1)

(0-2-1)

MUSG 183 - Studio Improvisation (1)

(0-2-1) Jazz styles, improvisational theories and techniques, with emphasis on small group playing and supervised improvisation. May be repeated for credit.

MUSG 211 - Class Woodwinds I (1)

(0-3-1) Not for woodwinds majors.

MUSG 212 - Class Woodwinds II (1)

(0-3-1)

Prerequisite: MUSG 211

MUSG 213 - Class Brasswinds I (1)

(0-3-1) Not for brasswinds majors.

MUSG 214 - Class Brasswinds II (1)

(0-3-1) Performance techniques and teaching procedures for brasswind instruments. May be substituted for MUSG 213.

Prerequisite: MUSG 213

MUSG 215 - Class Harp (1)

(0-2-1)

MUSG 217 - Class Percussion I (1)

(0-2-1)

MUSG 223 - Class Piano III (1)

(0-2-1)

Prerequisite: MUSG 124

MUSG 224 - Class Piano IV (1)

(0-2-1)

Prerequisite: MUSG 223

MUSG 226 - Class Strings (1)

(0-2-1)

MUSG 235 - Class Guitar II (1)

(0-2-1)

MUSG 239 - Class Voice (1)

(0-2-1)

MUSG 240 - Diction for Singers I (1)

(0-2-1) An introduction to the International Phonetic Alphabet and the study of phonetic rules and principles of pronunciation as applicable for singing in English, Italian, Latin and Spanish.

MUSG 241 - Diction for Singers II (1)

(0-2-1) An introduction to the International Phonetic Alphabet and the study of phonetic rules and principles of pronunciation as applicable for singing in German and French.

MUSG 245 - Jazz Keyboard I (1)

(0-2-1) An introduction to jazz keyboard techniques with emphasis on ensemble playing.

MUSG 246 - Jazz Keyboard II (1)

(0-2-1) Continuation of MUSG 245.

Prerequisite: MUSG 245

MUSG 345 - Jazz Keyboard III (1)

(0-2-1) Jazz keyboard techniques with emphasis on solo playing.

Prerequisite: MUSG 246

MUSG 346 - Jazz Keyboard IV (1)

(0-2-1) Continuation of MUSG 345.

Prerequisite: MUSG 345

MUSG 379 - Double Reed Making (1)

(0-2-1) Concepts and skills of making double reeds, oboe through contrabassoon. May be repeated for credit.

MUSG 383 - Studio Improvisation (1)

(0-2-1) May be repeated for credit.

Prerequisite: 4 hours in MUSG 183

MUSG 483 - Studio Improvisation (1)

(0-2-1) May be repeated for credit.

Prerequisite: 4 hours in MUSG 383

MUSH - Music (History and Literature)

MUSH 171 - Global Perspectives in Music (3)

(3-0-3) This course will expand the student's listening experience through a cross-cultural survey of concepts and styles of art and music. Topics will include non-Western music performance practices and styles from Africa, Eastern Europe, the Middle East, India, and Southeast Asia, as well as music of the Americas, Western art, music and jazz. The importance of this course lies in the artistic and cultural concepts that influence music and their relevance to the study of music as an academic and performance discipline in the 21st century.

MUSH 261 - Global Musical Experience (3)

(3-0-3) A general education elective; does not apply toward fulfilling music degree requirements. Designed to introduce students to the humanities by exploring music in Western and non-Western cultures. This course will aid in developing and understanding of different musical styles and listening skills. In addition, this course will foster an interest in a variety of musical styles and in embracing different cultures in an endeavor to create a more tolerant society. This course satisfies the Level 2 Knowledge HUM requirement for general education.

MUSH 267 - World Cultures Through the Humanities (3)

(2-2-3) Designed for students to investigate world cultures and how the humanities (music, art, dance and theatre) have been reflected through the historical time periods and how they are currently reflected in various cultures of the world.

MUSH 270 - Multicultural Arts (3)

(3-0-3) Interdisciplinary course designed to introduce students to the humanities by exploring literature, art, music, dance, film, alternative media, photography and philosophy in Western civilization as well as some exploration into the non-Western cultures of ancient India and China, contemporary India, China, Japan, Africa and Islam.

MUSH 329 - Church Music (2)

(2-0-2) Brief history; techniques of hymn and anthem playing and/or directing; planning the worship service.

MUSH 338 - Traditional Music History I (3)

(3-0-3) Students learn key components, ideas, persons, trends, styles and events in the development of roots music, prior to 1950.

MUSH 339 - Traditional Music History II (3)

(3-0-3) This course is a study of the development of bluegrass, blues, country music and related styles and the impact of technological advances on the art form from the development of early commercial recording companies and the broadcast industry through the early days of the Internet.

Prerequisite: MUSH 338

MUSH 340 - Traditional Music History III (3)

(3-0-3) This course provides an opportunity for students to learn key components, ideas, persons, trends, styles and events in the development and evolution of the style from 1960 to the present. The music which we are most involved stems from or is influenced by the music that is identified with the southern Appalachian mountain region, focusing on artists, trends, musical styles and events. Students will study the impacts of technological advances on the art form from radio and television to major motion pictures, the Internet and beyond.

Prerequisite: MUSH 339

MUSH 361 - History of Music I (3)

(3-0-3) A survey of the history of music in Western Europe from its ancient Greek beginnings through the early 18th century.

Prerequisite: MUSH 171 or MUSH 267

MUSH 362 - History of Music II (3)

(3-0-3) The history of music in Western Europe, Russia and America from the 18th century to the present.

Prerequisite: MUSH 361

MUSH 364 - African American Music (3)

(3-0-3) A survey of African American music in the U.S. from 1600 to present.

MUSH 365 - Jazz History and Literature (3)

(3-0-3) A survey of jazz history from its beginning (ca. 1850) to the present.

MUSH 465 - Music in America (3)

(3-0-3) A survey of the history of American music from colonial times to the present.

MUSH 481 - Keyboard Literature (3)

(3-0-3) Survey of keyboard music from the 16th century to present.

MUSH 490 - School Band Literature (2)

(2-0-2) Examination and criticism of music for training and concert use by groups at various levels of attainment.

MUSH 491 - Choral Literature (2)

(2-0-2) This course is a broad survey of choral music representing historical forms, eras and styles. Literature appropriate for elementary and secondary ensembles will be emphasized. Topics include history of choral literature, performance practice and conducting issues, as well as practical application of the literature through programming for various types of choirs and concert situations.

Prerequisite: MUSH 267

MUSH 492 - Solo Vocal Literature (2)

(2-0-2) A survey of the historical musico-poetic development of the art song with a look at its growth in Germany, Austria, France, Italy, Great Britain, the United States, Scandinavia, Spain and Eastern Europe from 1600 to present day.

MUSM - Music Ensembles

MUSM 183 - Introduction Traditional Music Ensemble (1)

(0-2-1) Private traditional instruction.

MUSM 200 - Student Recital (0)

(0-1-0) Music students and faculty present a recital each Thursday afternoon. Music students are required to take this course each semester.

MUSM 335 - Clarinet Choir (1)

(0-2-1)

MUSM 336 - Woodwind Ensemble (1)

(0-2-1)

MUSM 337 - Jazz Combo (1)

(0-2-1) Jazz combos provide the opportunity for musicians to perform in small groups. Students will also have the opportunity to arrange and compose for these combos. This course may be repeated.

MUSM 345 - Keyboard Chamber Music (1)

(0-2-1) An audition is required for the purpose of placing students in appropriate groups with appropriate repertoire. This course will expand the student's repertoire for chamber music with keyboard instruments by performing from a cross section of various musical styles and periods. This course may be repeated.

MUSM 361 - Trumpet Choir (1)

(0-2-1)

MUSM 362 - Trombone Choir (1)

(0-2-1)

MUSM 363 - Tuba and Euphonium Ensemble (1)

(0-2-1)

MUSM 367 - Brass Choir (1)

(0-2-1) Open to brass players.

MUSM 368 - Brasswind Ensemble (1)

(0-2-1)

MUSM 369 - Percussion Ensemble (1)

(0-2-1)

MUSM 370 - Concert Band (1)

(0-2-1) Open to all students.

MUSM 371 - Symphony Band (1)

(0-2-1) Open to all students.

MUSM 372 - Marching Band (1)

(0-5-1) Open to all students. Required for wind and percussion music education students. Upper division credit after earning two-hours of credit.

MUSM 378 - String Ensemble (1)

(0-2-1)

MUSM 380 - Jazz Ensemble I (1)

(0-2-1) Jazz ensemble provides the opportunity for musicians to perform and study the music of the large jazz ensemble. Jazz ensemble music incorporates many styles of jazz and commercial performance. Students will also have the opportunity to arrange and compose for this ensemble. This course may be repeated.

MUSM 381 - Jazz Ensemble II (1)

(0-2-1) Open to all students.

MUSM 382 - Jazz Vocal Ensemble (1)

(0-2-1) Open to all students.

MUSM 383 - Traditional Music Ensemble (1)

(0-2-1)

MUSM 384 - Guitar Ensemble (1)

(0-2-1)

MUSM 385 - Commercial Music Ensemble (1)

(0-3-1) This course will provide the opportunity for musicians to perform in ensembles focusing on classic repertoire within the multitude of rock/pop genres. This course may be repeated.

MUSM 387 - Accompanying (1)

(0-2-1) Two-hours of studio accompanying per week. This course may be repeated.

MUSM 389 - Keyboard Ensemble (1)

(0-2-1) Preparation and performance of piano ensemble literature.

MUSM 390 - Vocal Ensemble (1)

(0-2-1)

MUSM 391 - University Chorus (1)

(0-3-1) Open to all University students interested in singing.

MUSM 392 - Concert Choir (1)

(0-2-1) Open to all students.

MUSM 393 - Chamber Singers (1)

(0-3-1) Selected group of 16 singers.

MUSM 394 - Operaworks (1)

(0-2-1) An introduction to the techniques of musical theatre with emphasis on the integration of music and action-dramatic study of operatic roles.

MUSM 400 - Student Recital (0)

(0-1-0) Music students and faculty present a recital each Thursday afternoon. Music students are required to take this course each semester.

MUSP - Music Private Applied

Private Applied: *Development of performance skills through the study of various etudes, solos and other literature. Private applied music courses are typically offered in the fall and spring terms and may be repeated for credit. One to two credit courses meet for one-half hour each week and three-*

credit courses meet for one hour each week, for a minimum of 14 lessons each semester.

MUSP 101 - Private Flute (1-3)

MUSP 102 - Private Oboe (1-3)

MUSP 103 - Private Bassoon (1-3)

MUSP 104 - Private Clarinet (1-3)

MUSP 105 - Private Saxophone (1-3)

MUSP 106 - Private Horn (1-3)

MUSP 107 - Private Trumpet (1-3)

MUSP 108 - Private Euphonium (1-3)

MUSP 109 - Private Trombone (1-3)

MUSP 110 - Private Tuba (1-3)

MUSP 116 - Private Harp (1-3)

MUSP 119 - Private Percussion (1-3)

MUSP 127 - Private Violin (1-3)

MUSP 128 - Private Viola (1-3)

MUSP 129 - Private Cello (1-3)

MUSP 130 - Private Double Bass (1-3)

MUSP 134 - Private Jazz (1-2)

MUSP 135 - Private Classical Guitar (1-3)

MUSP 136 - Private Guitar (1-3)

MUSP 137 - Private Electric Bass (1-3)

MUSP 138A - Private Bluegrass Banjo (1-4)

MUSP 138B - Private Old Time Banjo (1-4)

MUSP 138C - Private Mandolin (1-4)

MUSP 138D - Private Traditional Guitar (1-4)

MUSP 138E - Private Country Electric Guitar (1-4)

MUSP 138F - Private Upright Traditional Bass (1-4)

MUSP 138G - Private Dobro (1-4)

MUSP 138H - Private Mountain Dulcimer (1-4)

MUSP 138I - Private Bluegrass and Country Fiddle (1-4)

MUSP 138J - Private Old Time Fiddle (1-4)

MUSP 138K - Private Celtic Fiddle (1-4)

MUSP 138L - Private Special Traditional Instruction (1-4)

This course is offered for students who wish to study, as an elective, instruments not usually offered at the Kentucky Center for Traditional Music (e.g. steel guitar, bagpipes, or other) when there is student demand and we have qualified instructors.

MUSP 138V - Private Traditional Voice (1-4)

MUSP 140 - Private Voice (1-3)

MUSP 141 - Private Harpsichord (1-3)

MUSP 142 - Private Organ (1-3)

MUSP 143 - Private Piano (1-3)

MUSP 162 - Private Composition (1-3)

MUSP 163 - Private Conducting (1-3)

MUSP 200 - Performance Class (0)

Music major and minor students must register for MUSP 200 Performance Class (lower division) or MUSP 400 Performance Class (upper division) concurrently with Private Applied Lessons in the principal applied area. Performance Class receives no credit and is graded pass/fail, but attendance and performance in this course may affect the student's grade in Private Applied Lessons.

Prerequisite: Consent of instructor

MUSP 201 - Private Flute (1-3)

MUSP 202 - Private Oboe (1-3)

MUSP 203 - Private Bassoon (1-3)

MUSP 204 - Private Clarinet (1-3)

MUSP 205 - Private Saxophone (1-3)

MUSP 206 - Private Horn (1-3)

MUSP 207 - Private Trumpet (1-3)

MUSP 208 - Private Euphonium (1-3)

MUSP 209 - Private Trombone (1-3)

MUSP 210 - Private Tuba (1-3)

MUSP 216 - Private Harp (1-3)

MUSP 219 - Private Percussion (1-3)

MUSP 227 - Private Violin (1-3)

MUSP 228 - Private Viola (1-3)

MUSP 229 - Private Cello (1-3)

MUSP 230 - Private Double Bass (1-3)

MUSP 234 - Private Jazz (1-3)

MUSP 235 - Private Classic Guitar (1-3)

MUSP 236 - Private Guitar (1-3)

MUSP 237 - Private Electric Bass (1-3)

MUSP 238A - Private Bluegrass Banjo (1-4)

MUSP 238B - Private Old Time Banjo (1-4)

MUSP 238C - Private Mandolin (1-4)

MUSP 238D - Private Traditional Guitar (1-4)

MUSP 238E - Private Country Electric Guitar (1-4)

MUSP 238F - Private Upright Traditional Bass (1-4)

MUSP 238G - Private Dobro (1-4)

MUSP 238H - Private Mountain Dulcimer (1-4)

MUSP 238I - Private Bluegrass and Country Fiddle (1-4)

MUSP 238J - Private Old Time Fiddle (1-4)

MUSP 238K - Private Celtic Fiddle (1-4)

MUSP 238V - Private Traditional Voice (1-4)

MUSP 240 - Private Voice (1-3)

MUSP 241 - Private Harpsichord (1-3)

MUSP 242 - Private Organ (1-3)

MUSP 243 - Private Piano (1-3)

MUSP 262 - Private Composition (1-3)

MUSP 263 - Private Conducting (1-3)

MUSP 301 - Private Flute (1)

MUSP 302 - Private Oboe (1)

MUSP 303 - Private Bassoon (1)

MUSP 304 - Private Clarinet (1)

MUSP 305 - Private Saxophone (1)

MUSP 306 - Private Horn (1)

MUSP 307 - Private Trumpet (1)

MUSP 308 - Private Euphonium (1)

MUSP 309 - Private Trombone (1)

MUSP 310 - Private Tuba (1)

MUSP 316 - Private Harp (1)

MUSP 319 - Private Percussion (1)

MUSP 327 - Private Violin (1)

MUSP 328 - Private Viola (1)

MUSP 329 - Private Cello (1)

MUSP 330 - Private Double Bass (1)

MUSP 334 - Private Jazz (1-2)

MUSP 335 - Private Classical Guitar (1)

MUSP 336 - Private Guitar (1)

MUSP 337 - Private Electric Bass (1)

MUSP 338A - Private Bluegrass Banjo (1-4)

MUSP 338B - Private Old Time Banjo (1-4)

MUSP 338C - Private Mandolin (1-4)

MUSP 338D - Private Traditional Guitar (1-4)

MUSP 338E - Private Country Electric Guitar (1-4)

MUSP 338F - Private Upright Traditional Bass (1-4)

MUSP 338G - Private Dobro (1-4)

MUSP 338H - Private Mountain Dulcimer (1-4)

MUSP 338I - Private Bluegrass and Country Fiddle (1-4)

MUSP 338J - Private Old Time Fiddle (1-4)

MUSP 338K - Private Celtic Fiddle (1-4)

MUSP 338L - Private Special Traditional Instruction (1-4)

MUSP 338V - Private Traditional Voice (1-4)

MUSP 340 - Private Voice (1)

MUSP 341 - Private Harpsichord (1)

MUSP 342 - Private Organ (1)

MUSP 343 - Private Piano (1)

MUSP 360 - Junior Recital (3)

(0-3-3) Study and preparation with the appropriate private applied instructor of all components of a 30-minute solo recital performance.

MUSP 362 - Private Composition (1)

MUSP 363 - Private Conducting (1)

MUSP 400 - Performance Class (0)

Music major and minor students must register for MUSP 200 Performance Class (lower division) or MUSP 400 Performance Class (upper division) concurrently with private applied lessons in the principal applied area. Performance class receives no credit and is graded pass/fail, but attendance and performance in this course may affect the student's grade in private applied lessons.

Prerequisite: Consent of instructor

MUSP 401 - Private Flute (1-4)

MUSP 402 - Private Oboe (1-4)

MUSP 403 - Private Bassoon (1-4)

MUSP 404 - Private Clarinet (1-4)

MUSP 405 - Private Saxophone (1-4)

MUSP 406 - Private Horn (1-4)

MUSP 407 - Private Trumpet (1-4)

MUSP 408 - Private Euphonium (1-4)

MUSP 409 - Private Trombone (1-4)

MUSP 410 - Private Tuba (1-4)

MUSP 416 - Private Harp (1-4)

MUSP 419 - Private Percussion (1-4)

MUSP 427 - Private Violin (1-4)

MUSP 428 - Private Viola (1-4)

MUSP 429 - Private Cello (1-4)

MUSP 430 - Private Double Bass (1-4)

MUSP 434 - Private Jazz (1-3)

MUSP 435 - Private Classic Guitar (1-4)

Prerequisite: Eight hours in MUSP 235 with a "C" or better

MUSP 436 - Private Guitar (1-4)

MUSP 437 - Private Electric Bass (1-4)

MUSP 438A - Private Bluegrass Banjo (1-4)

MUSP 438B - Private Old Time Banjo (1-4)

MUSP 438C - Private Mandolin (1-4)

MUSP 438D - Private Traditional Guitar (1-4)

MUSP 438E - Private Country Electric Guitar (1-4)

MUSP 438F - Private Upright Traditional Bass (1-4)

MUSP 438G - Private Dobro (1-4)

MUSP 438H - Private Mountain Dulcimer (1-4)

MUSP 438I - Private Bluegrass and Country Fiddle (1-4)

MUSP 438J - Private Old Time Fiddle (1-4)

MUSP 438K - Private Celtic Fiddle (1-4)

MUSP 438V - Private Traditional Voice (1-4)

MUSP 440 - Private Voice (1-4)

MUSP 441 - Private Harpsichord (1-4)

MUSP 442 - Private Organ (1-4)

MUSP 443 - Private Piano (1-4)

MUSP 463 - Private Conducting (1-4)

MUSP 470 - Composition Recital (2)

(1-0-2) Preparation and performance in recital of student's compositions.

MUSP 480 - Private Applied Pedagogy (1)

(1-0-1) An examination of the literature related to teaching applied music and to historical performance practices associated with the repertory of the major performing area.

MUSP 499C - Senior Recital (3)

(3-0-3) A formal recital with an accompanying research paper and oral presentation covering the works and composers to be performed.

MUST - Music Theory

Music students should enroll in the appropriate music theory and music reading courses each semester until the completion of MUST 233 and MUST 237.

MUST 103 - Practical Theory for Traditional Music (2)

(1-2-2) An introduction to music theory as applicable to tradition-based musical styles such as bluegrass, country music, blues and gospel. Areas covered include chord construction, various scales, harmony, transposition, etc.

MUST 120 - Aural Skills (2)

(2-0-2) This course provides an opportunity for students to learn the essential elements of sight reading, sight singing and ear training as it applies to traditional music.

Prerequisite: MUST 103

MUST 131 - Music Theory I (3)

(3-0-3) An introduction to the basic elements of music theory followed by the study of diatonic functional harmonic elements including cadence types, seventh chords, and root position part-writing in SATB style. Melodic and rhythmic concepts will also be emphasized, and representative aural skills, analysis projects and keyboard exercises will be included.

Corequisite: MUST 133

MUST 132 - Music Theory II (3)

(3-0-3) A continuation of MUST 131, with emphasis on diatonic triads and seventh chords in inversion, non-chord tones, cadences, and part-writing in SATB style. Standard formal structures will be studied. Melodic and rhythmic concepts will also be emphasized, and representative aural skills, analysis projects and keyboard exercises will be included.

Corequisite: MUST 135

MUST 133 - Music Reading I (1)

(0-2-1) An introduction to the concepts and applications of reading music, vocally and instrumentally. Movable do-based solmization will be utilized, as will basic conducting patterns. Emphasis will be on diatonic major and diatonic minor melodies in treble and bass clefs, and simple and compound meter rhythmic exercises generally adhering to the common stressed/unstressed pattern of beats within duple, triple and quadruple meters.

Corequisite: MUST 131

MUST 135 - Music Reading II (1)

(0-2-1) A continuation of MUST 133, with emphasis on increased chromaticism melodically in treble and bass clefs, and increased complexity in the area of meter and rhythm. Movable do-based solmization will be utilized, as will basic conducting patterns.

Prerequisite: MUST 133

Corequisite: MUST 132

MUST 233 - Music Reading III (1)

(0-2-1) A continuation of MUST 135, with emphasis on increased chromaticism melodically in treble, bass, alto and tenor clefs. Rhythmic complexity will also increase through the study of irregular divisions in simple and compound meters. Movable do-based solmization will be utilized, as will basic conducting patterns.

Prerequisite: MUST 135

Corequisite: MUST 236

MUST 234 - Music Reading IV (1)

(0-2-1) A continuation of MUST 233, with emphasis on increased chromaticism melodically, including late Romantic and 20th-21st century chromaticism, modality, and atonality in treble, bass, alto and tenor clefs using movable do-based solmization where applicable. Rhythmic/metric complexity will also increase through the study of asymmetric meter, shifting meters, composite meter and other late Romantic through present day rhythmic/metric techniques. Basic and asymmetric conducting patterns will be utilized.

Prerequisite: MUST 233

Corequisite: MUST 237

MUST 236 - Music Theory III (2)

(3-0-2) A continuation of MUST 132, with emphasis on secondary dominants, chromatic harmony, and modulatory techniques. Part-writing in SATB style will be included, as will the study of larger formal structures. Melodic and rhythmic concepts will also be emphasized, and representative aural skills, analysis projects, and keyboard exercises will be included.

Prerequisite: MUST 132

Corequisite: MUST 233

MUST 237 - Music Theory IV (2)

(3-0-2) A continuation of MUST 236, with emphasis on harmonic, melodic, rhythmic, and formal elements from late Romanticism through the present day. Representative aural skills, keyboard, and an analytical term paper will be included. Students will gain a sense of overview by recognizing style characteristics, genre, form, period and composer for a variety of compositions from the Medieval Period through present day via visual and aural score shows.

Prerequisite: MUST 236

MUST 240 - Jazz Theory (2)

(2-0-2) This course will equip the student with the vocabulary, notation conventions, voicing norms, and chord/scale relationships associated with the practice of theory in a jazz or jazz related context.

Prerequisite: MUST 132

MUST 263 - Elementary Composition I (2)

(1-1-2) Study and practice of basic formal compositional principles.

Prerequisite: MUST 237

MUST 264 - Elementary Composition II (2)

(1-1-2) Continuation of MUST 263.

Prerequisite: MUST 263

MUST 331 - Counterpoint (2)

(2-0-2) Writing of 16th and 18th century strict and free counterpoint, cannon, invention, fugue. Some 20th century techniques.

Prerequisite: MUST 237

MUST 355 - Traditional Vocal Harmony (2)

(1-2-2) Practical guidance in singing lead, tenor, baritone and bass harmonies as they are performed in bluegrass, country music and gospel groups. Public performances are optional.

Prerequisite: MUST 103

MUST 363 - Intermediate Composition I (2)

(1-1-2) Study and writing of original creative work. One hour weekly in private study; one hour in composition seminar-colloquium.

Prerequisite: MUST 264

MUST 364 - Intermediate Composition II (2)

(1-1-2) A continuation of MUST 363.

Prerequisite: MUST 363

MUST 432 - Advanced Arranging (2)

(2-0-2) Continuation of MUST 430.

Prerequisite: MUST 430

MUST 433 - Arranging for Jazz Ensembles I (2)

(2-0-2) Techniques of arranging for large and small jazz ensembles.

MUST 434 - Arranging for Jazz Ensembles II (2)

(2-0-2) Continuation of MUST 433.

Prerequisite: MUST 433

MUST 445 - Chart Writing and Application (3)

(3-0-3) This course provides an opportunity for students to learn advanced elements and techniques of sight reading, sight singing and ear training as it applies to traditional music.

Prerequisite: MUST 345

MUST 461 - Advanced Composition I (2)

(1-1-2) Study, writing and performance of students' original creative work. Private conferences and composition seminar in colloquium.

Prerequisite: MUST 364

MUST 462 - Advanced Composition II (2)

(1-1-2) Continuation of MUST 461.

Prerequisite: MUST 461

MUST 465 - Form and Analysis (2)

(2-0-2) A study of the elements of musical design through aural and score analysis.

Prerequisite: MUST 233 and MUST 237

MUSW - Music Research

MUSW 310 - Music Business (2)

(2-0-2) This course gives an overview of the music industry including copyright law, publishing, contracts, management, licensing and merchandising, A&R, publicity, advertising, marketing, private studio management, grants and taxation. Students will gain an overall understanding of the people, technologies and laws that affect all aspects of the music business. This course is essential for any student wishing to pursue a career in the music industry.

MUSW 325 - Music Recording and Sound Reinforcement (3)

(3-0-3) An introduction to basic recording and sound reinforcement techniques. Topics covered include microphone choice and placement, signal flow, signal processing with outboard and plug-in processors, digital recording, digital editing, and live recorded sound mixing and mastering.

MUSW 476 - Special Problems in Music (1-3)

(1 to 3 hrs.) Independent study and research in an area of the student's choosing. Requires completion of paper or other tangible evidence of the results of the study.

MUSW 499C - Senior Project (3)

(0-3-3) This course allows the student to develop an interdisciplinary capstone (with approval of private applied instructor) synthesizing their music specialization with their Bachelor of Arts minor area. This course project will emphasize oral and written communication skills.

NEUR - Neuroscience

NEUR 121 - Introduction to Brain and Behavior (3)

(3-0-3) The course provides a basic understanding of the biological basis of mental processes and behavior. The course will focus on the relations among brain function, psychological processes and behavior. Topics will include anatomical and functional organization, higher brain functions and disorders. Equates with PSY 121. This course satisfies the Level 2 Knowledge NSC requirement for general education.

NEUR 223 - Brain Development and Sex Differences (3)

(3-0-3) Covers basic structural and functional differences between the female brain and the male brain. Major topics will include differences in architecture of the brain, brain neurochemistry, higher brain functions and disorders. Equates with PSY 223 and GST 223.

Prerequisite: One of the following: PSY 154, NEUR 121, or PSY 121

NEUR 321 - Aging Brain (3)

(3-0-3) Covers basic structural and functional changes due to aging. Major topics will include aging-related changes in architecture of the brain, brain neurochemistry, higher brain functions and disorders. Equates with PSY 321.

Prerequisite: NEUR 121/PSY 121 or PSY 154 or consent of instructor

NEUR 421 - Behavioral Neuroscience (3)

(3-0-3) Physiological mechanisms of normal human and animal behavior. Anatomy and physiology relevant to student of sensory and motor functions, emotion, motivation and learning. Equates with PSY 421.

Prerequisite: PSY 154 and one of the following: NEUR/PSY 121 or NEUR/PSY 223 or NEUR/PSY 321 or permission of instructor

NEUR 465 - Drugs and Behavior (3)

(3-0-3) An introduction to the biological and psychological principles involved in the study of psychoactive drugs. Includes discussion of drug action, drug classification and theories of chemical dependency. Equates with PSY 465.

Prerequisite: One of the following: PSY 154, NEUR 121, or PSY 121

NURA - Nursing (Associate Level)

NURA 114 - Fundamental Nursing Concepts (7)

(5-6-7) This course introduces fundamental nursing concepts related to nursing, health, environment and client profile concepts. Emphasis is placed on the concepts of attributes and roles of nursing, care

competencies, client care profiles, oxygenation, homeostasis and regulation, protection and movement.

Prerequisite: Official admission to the Associate Degree Nursing Program and BIOL 234, Math Core, and ENG 100

Corequisite: NURA 114L & BIOL 235 & FYS 101

NURA 115 - Nursing Care Concepts I (5)

(3-6-5) This course is designed to further develop the concepts within the metaparadigm of nursing, health, environment and client. Emphasis is placed on the concepts of homeostasis and regulation, oxygenation, and protection.

Prerequisite: NURA 114

Corequisite: NURA 115L, NURA 117, PSY 154, and ENG 200

NURA 117 - Maternal-Child Concepts (3)

(2-3-3) This course focuses on the concepts of sexuality, reproduction and family. Students will describe and provide client centered maternal-child care in a manner that promotes emotional, mental and social well-being and use health promotion and maintenance strategies to promote optimal health.

Prerequisite: NURA 114

Corequisite: NURA 117L, NURA 115, PSY 154, and ENG 200

NURA 211 - Mental Health Concepts (4)

(3-3-4) This course is designed to further develop the concepts within the metaparadigm of nursing, health, environment and client related to mental health concepts. The student will demonstrate client centered care in a manner that promotes emotional, mental and social well-being.

Prerequisite: NURA 115 and NURA 117

Corequisite: COMS 108 and NURA 212

NURA 212 - Nursing Care Concepts II (5)

(3-6-5) This course builds on nursing, health, environment and client concepts from the first year of the program. Emphasis is placed on the concepts of homeostasis, regulation, oxygenation, professional nursing and health care.

Prerequisite: NURA 115 and NURA 117

Corequisite: COMS 108 and NURA 211

NURA 214 - Transitional Nursing Concepts (2)

(2-0-2) This course promotes integration of nursing, health, environmental and client concepts, issues and evidence based practice guidelines to promote effective transition to practice.

Prerequisite: NURA 211 and NURA 212

Corequisite: NURA 215

NURA 215 - Advanced Health Concepts (10)

(6-12-10) This course incorporates advanced health concepts related to nursing, health, environment and client to promote effective nursing practice. Integration of the role of the registered nurse will be provided through an integrated practicum of a minimum 120 hours of concentrated clinical experiences providing direct client care in compliance with the Kentucky Board of Nursing (KAR 20:320).

Prerequisite: NURA 211 and NURA 212

Corequisite: NURA 215L and NURA 214

NURB - Nursing (Bachelor Level)

NURB 260 - Concepts of Health and Wellness in Nursing (3)

(3-0-3) Restriction: Admission to the Bachelor of Science in Nursing (BSN Pre-licensure). This course emphasizes wellness, health promotion, and health maintenance strategies that can reduce morbidity and mortality and promote healthy lifestyles of individuals and families from diverse cultures across the lifespan. Students are introduced to the application of professional nursing standards and use of the nursing process.

NURB 261 - Clinical Judgment (3)

(3-0-3) Restriction: Admission to the Bachelor of Science in Nursing Program (BSN), pre-licensure component. This course is designed to equip first year nursing students with the tools they need to be successful within the BSN program and ultimately as they transition into nursing practice.

This course outlines how to use clinical judgment when encountering patient scenarios, prioritizing patient needs and ultimately making safe, evidence-based decisions that lead to quality patient outcomes. Students will learn how to think critically by using the National Council of State Boards of Nursing (NCSBN) Model of Clinical Judgment. Upon receiving patient information through case studies, students will learn to draw on the clinical judgment competencies to process patient information and make situation-based decisions. Students will work to understand the "why" behind clinical decision making throughout the course to prevent medical error and failure to rescue in the clinical setting upon graduation.

Additionally, the course will focus on dosage calculation, care planning, concept mapping and effective communication, with an emphasis on basic principles of quality and safety. This course will address areas of time management and test taking strategies with an emphasis on effective studying techniques.

*Note: Students must be concurrently enrolled in the following required courses along with NURB 260, NURB 261, NURB 262, and BIOL 217 & 217L. If a student has PCC deficit from high school (i.e., foreign language, humanities) listed on their program evaluation, students must complete the required courses prior to graduation. Students must complete all courses successfully in order to progress to the next semester in the program. Students must also take all courses in sequence for each semester as listed in the program sequence pattern.

Corequisite: NURB 260, NURB 262, and BIOL 217

NURB 262 - Foundational Skills for Professional Nursing (6)

(4-6-6) This course provides a foundation for progression through the program and introduces basic biopsychosocial and health assessment skills needed for the role and function of the professional nurse. Fundamental concepts of therapeutic communication and pharmacology are included.

Corequisite: NURB 262L

NURB 264 - Family Health Nursing (6)

(4-6-6) This course emphasizes theories and concepts related to the childbearing and childrearing families from diverse cultures. Using the nursing process, students promote family health with a focus on health promotion and maintenance during pregnancy and in children from birth through adolescence.

Prerequisite: NURB 262

NURB 266 - Community-Based Nursing Care (5)

(3-6-5) This course emphasizes health promotion, disease prevention, national health objectives and the role of the nurse in providing community-oriented care for healthy individuals, families and groups from diverse cultures across the life span.

Prerequisite: NURB 262

NURB 309 - Health Care Delivery Systems (3)

(3-0-3) This course focuses on health care policy, financial, and regulatory environments that impact delivery of health care services. Students are prepared to coordinate care for individuals with complex illnesses in a complex health care environment. This course is restricted to students enrolled in the Bachelor of Science in Nursing, Post-Licensure Program.

NURB 314 - Health Assessment in Nursing (3)

(2-3-3) This course focuses on advanced health assessment skills necessary for the post-licensure registered nurse. Comprehensive psychosocial and physical assessment is performed for clients across the lifespan. This course is restricted to students enrolled in the Bachelor of Science in Nursing, Post-Licensure Program.

Corequisite: NURB 314L

NURB 316 - Pathophysiology for Nursing Practice (4)

(4-0-4) Restriction: Admission to the BSN Program, pre-licensure component. This course focuses on pathophysiological concepts essential to nursing practice. Pathophysiologic processes across the lifespan will be explored and clinical application of these processes will be emphasized.

NURB 318 - Pharmacology and the Nursing Process (3)

(3-0-3) This course emphasizes the pharmacological knowledge required to safely care for and educate patients across the lifespan. Students synthesize and apply knowledge of pharmacokinetics and pharmacodynamics in the management of common disease processes using the nursing process.

Prerequisite: NURB 264 and NURB 266

NURB 320 - Care of Older Adults (5)

(3-6-5) In the provision of nursing care, emphasis is on health promotion and health maintenance strategies for the physical, developmental and psychosocial dimensions of the older adult from diverse cultures.

Prerequisite: NURB 266

NURB 322 - Mental Health Nursing (4)

(2-6-4) This course emphasizes theories and concepts related to the nursing care of individuals and families who have alterations in mental health. Using the nursing process, students participate in an interdisciplinary approach in the provision of nursing care to individuals and families. Emphasis is placed on interpersonal functioning and ethical issues that are relevant to mental healthcare.

Prerequisite: NURB 266

NURB 324 - Acute Alterations in Adult Health I (7)

(4-9-7) This course is the first in a two-part series of courses in acute alterations in adult health. The focus of this course is on providing nursing care with an interdisciplinary approach to individuals and families of diverse cultures, throughout the life span, who have common acute alterations in health. Focus is also placed on ethical issues that are prevalent in the acute care setting.

Prerequisite: NURB 322

Corequisite: NURB 324L

NURB 326 - Advanced Health Assessment (3)

(2-3-3) Restriction: Junior standing in the Bachelor of Science in Nursing (Pre-licensure). This course focuses on advanced performance of comprehensive physical and psychosocial health assessments as related to the role and function of the professional nurse. Emphasis is on wellness, health promotion and health maintenance strategies for individuals from diverse cultures across the lifespan. Students build upon the foundation of previous assessment skills.

Corequisite: NURB 326L

NURB 327 - Transitions to Professional Nursing Practice (4)

(4-0-4) This course is designed to introduce the baccalaureate student to the program and to professional nursing. Students will be introduced to resources necessary for success in the program. Roles and issues related to professional nurses will be explored with an emphasis on nursing theory, quality, communication, collaboration, ethics, legal concerns and promotion of better patient health outcomes. This course is restricted to students enrolled in the Bachelor of Science in Nursing, Post-Licensure Program.

NURB 361 - Introduction to Nursing Research (3)

(3-0-3) An introduction to the research process and utilization of nursing research as the basis for professional nursing practice. Focus is on the critiquing of nursing research to determine reliability and validity.

Prerequisite: BIOL 217

NURB 406 - Evidence-Based Practice (3)

(3-0-3) This course examines the research process in nursing. An emphasis is on the use of evidence-based practice (defined as the integration of best research evidence with clinical expertise and patient values) and clinical reasoning skills to promote better health outcomes. This course is restricted to students enrolled in the Bachelor of Science in Nursing, Post-Licensure Program.

Prerequisite: MATH 353 with a grade of "C" or better to assist the student with statistical analysis of research studies.

NURB 407 - Population Health (4)

(4-0-4) This course is designed to provide the post-licensure registered nurse a broad perspective of nursing care concepts related to diversity, practice partnerships and population health. Vulnerable populations and rural health are emphasized. This course is restricted to student enrolled in the Bachelor of Science in Nursing, Post-Licensure Program.

NURB 408 - Quality Improvement in Nursing (3)

(3-0-3) This course is designed to provide the knowledge, skills, and attitudes necessary to promote better health outcomes by applying quality improvement principles, such as benchmarking, data display, process, system change, the PDSA cycle methodology, and sustainment mechanisms, as they relate to nursing and health care. This course is restricted to students enrolled in the Bachelor of Science in Nursing, Post-Licensure Program.

NURB 409 - Leadership in Nursing (4)

(4-0-4) The role and function of the professional nurse as a manager of nursing care is studied in relation to leadership and management theories, strategies and principles of management. This course is restricted to students enrolled in the Bachelor of Science in Nursing, Post-Licensure Program.

NURB 420 - Acute Alterations in Adult Health II (7)

(4-9-7) This course is a continuation of NURB 324.This course focuses on an interdisciplinary approach to providing nursing care for individuals and families of diverse cultures throughout the life span, who have complex acute alterations in health. Emphasis is placed on progressive measures that sustain life and the ethical issues that are prevalent in the acute care setting.

Prerequisite: NURB 324

NURB 421 - Nursing Synthesis Practicum (3)

(0-9-3) This course enables students to integrate knowledge from the Bachelor of Science in Nursing, Post-Licensure Program into the clinical practice setting.

Prerequisite: Completion of all other required Bachelor of Science in Nursing, Post-Licensure Program courses.

Corequisite: NURB 499D & NURB 421L

NURB 422 - Chronic Alterations in Health (5)

(3-6-5) This course focuses on the provision of nursing care to persons across the life span who are experiencing a variety of chronic alterations in health/terminal illnesses. Emphasis is placed on current and emerging issues in healthcare delivery.

Prerequisite: NURB 326

NURB 424 - Public Health (3)

(3-0-3) This course is designed to study and apply the public health core functions and the essential services of public health to wellness promotion and disease prevention frameworks of diverse populations. Emphasis is placed on application and assessment of the core functions.

Prerequisite: NURB 326

NURB 461 - Nursing Leadership and Management (3)

(3-0-3) The role and function of the professional nurse as a manager of nursing care is studied in relation to leadership and management theories, strategies and principles of management. Three hours of theory per week.

Prerequisite: NURB 361

NURB 472 - Independent Study in Nursing (1-6)

(1 to 6 hrs.) Opportunity for in-depth study in an area of special interest in nursing.

NURB 498 - Nursing Senior Seminar (3)

(3-0-3) An in-depth examination of the students' ability to perform critical thinking, decision-making, problem-solving, and clinical reasoning. The course provides students with the opportunity to enhance their reasoning abilities along with the concept of reflection upon professional practice in areas including, but not limited to, current issues and trends relevant to nursing and healthcare.

NURB 499C - Advanced Nursing Practicum (3)

(3-12-3) This course is the senior capstone course of the BSN Pre-licensure Program. This course provides an opportunity to demonstrate the application of critical thinking skills through the nursing process, in the planning and provision of nursing care for patients at any stage of the life span experiencing health alterations. This will be done in a supervised setting and will meet the Kentucky Board of Nursing (KBN) integrated practicum requirement. This course focuses on facilitating an interdisciplinary approach to provide and manage nursing care for individuals and families of diverse cultures throughout the life span, who have alterations in health.

Prerequisite: NURB 361

NURB 499D - Nursing Synthesis (3)

(3-0-3) This course serves as the capstone course for the BSN Post-licensure Program. Emphasis is placed on the synthesis of knowledge and methods from a variety of disciplines to promote improved patient care outcomes through the application of leadership skills and clinical reasoning. This course is restricted to students enrolled in the Bachelor of Science in Nursing, Post-Licensure Program.

Prerequisite: Completion of all other required Bachelor of Science in Nursing, Post-Licensure Program courses.

Corequisite: NURB 421

NUR - Nursing

NUR 385 - Service Learning: Camp Nursing (2)

(2-0-2) Service Learning: Camp Nursing is a course designed to increase the students' understanding and appreciation of camp nursing and the camp experience for children who have experienced the loss of a loved one within the last year. Emphasis will be placed on bereavement, the grief process, growth and development and psychosocial adaptation of the school-age and adolescent child. The course has a seminar component during the spring semester with a field experience (camp) required during the Summer II term.

Prerequisite: NURA 103, NURB 262, or NURB 258

NURS - Nursing

NURS 100 - Orientation to Health Care Professions (1)

(1-0-1) A study of career opportunities available in health care, the standard program requirements and an overview of the job responsibilities.

NURS 120 - Dosage Calculation for Health Care Professionals (2)

(2-0-2) Increase the ability of health care professional majors to safely and accurately calculate medication dosages.

NURS 202 - Medical Terminology (2)

(2-0-2) The study of vocabulary components and terms related to sciences and medicine. Previous knowledge of medicine or related discipline is not necessary. Equates with IMS 202.

NURS 300 - Ethical and Legal Issues in Health Care (3)

(3-0-3) This course is an overview of the ethical and legal issues in today's health care environment. Emphasis includes such areas of discussion as confidentiality, HIV/AIDS, artificial life support, euthanasia, abortion, genetic science. Allocation of resources and professional gatekeeping.

NURS 301 - Selected Topics (1-3)

(1 to 3 hrs.) Investigation of specific topics of interest related to nursing and/or allied health sciences. Equates with IMS 301.

NURS 302 - Health Maintenance Through Life (3)

(3-0-3) This course is designed to increase one's awareness of the importance of health maintenance throughout the life span. Emphasis will be on the concepts of health maintenance through health promotion and illness prevention strategies for all stages of the life span. Equates with IMS 302.

NURS 303 - Women's Health Care (3)

(3-0-3) Increase one's awareness of the importance of women's health care in all dimensions. Emphasis will be placed on health maintenance issues for women that include women's developmental issues throughout their life span, general guidelines for health care (including screening and interventions), sexuality facts, health needs and problems related to the reproductive system, selected health care issues and psychosocial concerns. Equates with IMS 303 and GST 474.

NURS 304 - Men's Health Issues (3)

(3-0-3) This course is designed to increase one's awareness of the importance of men's health issues in all dimensions. Emphasis will be placed on health maintenance issues for men that include men's developmental issues throughout their life span, general guidelines for health care (including screening and interventions), sexuality facts, health needs and problems related to the reproductive system, selected health care issues and psychosocial concerns. Equates with IMS 304.

NURS 318 - Success in College, Career, and Life (3)

(3-0-3) A comprehensive review of strategies for success in college, employment/career, and in life. Open to any interested student.

NURS 321 - Introduction to Multidisciplinary Health Services (3)

(3-0-3) A study of various health careers focusing on the roles and responsibilities, levels of education and credentialing, daily functions and career advancement options. Equates with IMS 321.

NURS 330 - Health Care Management of Infants and Young Children (3)

(3-0-3) This course focuses on promotion of health in infants and young children. Anticipatory guidance regarding growth and development and health as well as management of common acute and chronic illnesses will be explored.

NURS 331 - Issues and Trends in Health Care Delivery Systems (3)

(3-0-3) This course is a survey course of health care delivery in the United States, which will allow students to gain a more global picture of health care and public health services.

NURS 345 - Global Health (3)

(3-0-3) Through this course, the student will develop a global awareness of societal aspects of health and disease through the critical examination of the sociopolitical constraints in health and health care of populations. The roles of community, national, and international health organizations will be examined. Equates with IMS 345 and IST 345.

NURS 349 - Pharmacology (3)

(3-0-3) The introductory study of pharmacological agents used to promote, maintain and restore health. Focuses on concepts of medication administration and the role and function of the professional nurse as related to pharmacological agents. Three hours of theory per week.

NURS 361 - Leadership for the Health Care Professional (3)

(3-0-3) This course provides students with a knowledge base and foundation for the study and practice of leadership in health care systems. Emphasis is placed on the theories of leadership, structures of organizations in health care, and the effective/efficient use of human and material resources. Equates with IMS 361.

NURS 362 - Cultural Competency for Health Professionals (3)

(3-0-3) Open to any interested student. This course addresses the fundamentals of clinical cultural competence, cultural knowledge of process and populations that is needed across clinical settings, and cultural competence in working with specific clinical populations. These will allow students to apply both the fundamentals of clinical cultural competence and generic cultural knowledge in a way to develop new eyes, new ears, and new ways of thinking when providing healthcare.

NURS 380 - Health Promotions for Aging Persons (3)

(3-0-3) This course champions healthy aging by demonstrating how to prevent or manage disease and make large-scale improvements toward health and wellness in the older adult population. Learners will synthesize research evidence with practical, effective strategies. Health promotion, resources provision, and assessment of the older adult population will be incorporated.

NURS 401 - Disaster and Emergency Management (3)

(3-0-3) A study of the cause, impact and mitigation of disasters and emergency management. Open to any interested student.

NURS 410 - Rural Public Health (3)

(3-0-3) Open to any interested student. This course addresses critical topics important to rural public health in order to facilitate a deeper understanding of both the challenges and opportunities. Students will be guided through the rural health social, professional, and organizational landscape. A systematic analysis will provide a population perspective to the significant, yet too often neglected, segment of American society.

NURS 430 - Health Disparities (3)

(3-0-3) This course focuses on a solution-oriented, candid outlook on the problem of health disparities and the ongoing need for diversity in the field of health. Focus will be on looking at diversity and inclusion, as well as the context, controversies, and solutions that impact health disparities.

NURS 473 - Health Care Management of Children (3)

(3-0-3) Open to any interested student. Promotion of wellness of children and adolescents with emphasis on meeting the health care needs of children in the classroom and home. Discussion of basic first aid, common acute and chronic illness in children. Equates with IMS 473.

NURS 475 - Human Sexuality (3)

(3-0-3) Open to any interested student. A study of the biopsychosocial factors inherent with the sexuality of human beings and their influences on behavior.

NUTR - Nutrition

NUTR 101 - Nutrition and Well Being (3)

(3-0-3) This course will cover the fundamental concepts of nutrition: terminology, physical and chemical properties of nutrients, food sources and functions. This course will include the body's utilization of food, nutrients and calories (absorption, transport and metabolism). This course presents the core information for the introduction to the applied science of nutrition. This course will explore what Americans are eating, dietary guidelines and recommended nutrient intakes for Americans, and the important relationship between diet and health. This course satisfies the Level 2 Knowledge NSC requirement for general education.

NUTR 201 - Principles of Nutrition (3)

(3-0-3) Basic description of the elements of human nutrition, their function in the body and food sources. Guide for healthy nutritional practices and nutritional needs throughout the life cycle. Equates with HLTH 206.

PHED - Physical Education

PHED 100 - Golf (1)

(0-2-1) Emphasis on skill, knowledge and techniques for individual participation.

PHED 101 - Tennis (1)

(0-2-1) Emphasis on skill, knowledge, tactics and techniques for individual participation.

PHED 102 - Badminton (1)

(0-2-1) Emphasis on skill, knowledge, tactics and techniques for individual participation.

PHED 105 - Conditioning (1)

(0-2-1) Emphasis on developing fitness through a variety of exercises and activities.

PHED 107 - Bowling (1)

(0-2-1) Basic movement skills involved in bowling.

PHED 110 - Martial Arts/Self-Defense (1)

(0-2-1) Activity course in basic martial arts techniques and etiquette, plus self-defense concepts and strategies.

PHED 113 - Soccer (1)

(0-2-1) Techniques and participation in soccer.

PHED 118 - Volleyball (1)

(0-2-1) Rules, techniques and participation in volleyball.

PHED 127 - Racquetball (1)

(0-2-1) Emphasis on skill, knowledge and strategy.

PHED 130 - Beginning Swimming (1)

(0-2-1) Learning to swim well enough to care for one's self under ordinary conditions.

PHED 131 - Intermediate Swimming (1)

(0-2-1) Perfection of standard strokes, diving.

PHED 132 - Lifesaving (1)

(0-2-1) Rescue methods in all types of water.

PHED 133 - Instruction to Water Safety (1)

(0-2-1) Teaching methods and techniques in lifesaving.

PHED 140 - Aerobics (1)

(0-2-1) Emphasis on knowledge, techniques, aerobic fitness and safety methods involved with individual participation in a variety of aerobic formats.

PHED 141 - Weight Training (1)

(0-2-1) Emphasis on knowledge, techniques, methods and training program development for those interested in strength development.

PHED 142 - Softball (1)

(0-2-1) Emphasis on skill and performance enhancement, as well as increasing basic knowledge and strategic background.

PHED 143 - Backpacking and Orienteering (1)

(0-2-1) Designed to develop a working knowledge pertaining to the fundamentals of survival camping. Focus on the development of stamina and physical endurance. Nine-week class.

PHED 200 - Adventure Leadership and Programming (2)

(2-0-2) This course focuses on teaching fundamental outdoor leadership techniques, history, and ethics through discussions and experiential learning. The major emphasis will be on understanding small group dynamics, expedition behavior, intra- and inter-personal skills and risk management throughout an outdoor experience.

Prerequisite: Instructor consent

PHED 204 - Officiating (2)

(2-0-2) Interpretation of rules for major sports. Methods and techniques of officiating; laboratory experience in officiating.

PHED 205 - Lifetime Fitness (3)

(2-2-3) Designed to provide the student with scientifically-based knowledge concerning practical application of physical fitness training and evaluation procedures while participating in a fitness program.

Corequisite: PHED 205L

PHED 211 - Lifeguard Training (2)

(1-2-2) Responsibilities of lifeguards, equipment, health and sanitation, and inspection of waterfront areas.

PHED 216 - Methods of Teaching Lifetime Sports (1)

(0-2-1) This course is designed to prepare students to develop safe and appropriate learning activities, content delivery and assessment skills; as these pertain to at least three different lifetime sports or activities, they are prepared to include these in a school's physical education curriculum.

PHED 217 - Methods of Teaching Gymnastics and the Martial Arts (1)

(0-2-1) This course is designed to prepare students to develop safe and appropriate learning activities, content delivery and assessment skills; as these pertain to stunts, tumbling and one martial art form, they are prepared to include these in a school's physical education curriculum.

PHED 220 - Athletic Training I (3)

(3-0-3) An introduction to athletic training, including basic injury prevention, management and rehabilitation principles.

PHED 221 - Therapeutic Modalities (2)

(1-2-2) Study and use of therapeutic modalities for athletic injury, treatment and rehabilitation.

PHED 301 - Evaluation in Exercise Science (3)

(3-0-3) Methods, techniques and procedures used in evaluation of students in physical education and recreation.

PHED 306 - Functional Anatomy/Biomechanics (3)

(3-0-3) Study of structural and mechanical factors in human motion.

PHED 315 - Motor Development and Motor Learning (3)

(3-0-3) Understanding the principles of motor development and learning to use these when teaching students at various developmental stages, to promote optimal learning.

PHED 326 - Exercise Program Leadership (3)

(2-2-3) Emphasis on leadership skills, motivational techniques, choreography, administrative functions dealing with equipment purchase, organization and use, and experiences in aerobic exercise and personal training formats.

Prerequisite: PHED 306, BIOL 234, or BIOL 244

Corequisite: PHED 326L

PHED 330 - Scientific Bases of Sport Coaching (3)

(3-0-3) A study of the physiological, biomechanical and nutritional dimensions of the coaching of sports.

PHED 332 - Principles of Strength & Conditioning (3)

(3-0-3) A study of the physiological, biomechanical and administrative aspects of designing and supervising strength and conditioning programs for various sports.

PHED 336 - Foundations of Sports Psychology (3)

(3-0-3) Focus on theories and practices which when understood and used can enhance the coach-athlete relationship and improve sport performance.

PHED 340 - Athletic Training II (3)

(3-0-3) An advanced course involving all aspects of the athletic training/sports medicine field.

PHED 341 - Athletic Injury Assessment (2)

(1-2-2) Evaluation of athletic injuries.

PHED 350 - Coaching of Sport (2)

(1-2-2) May be repeated as separate sections. Students will demonstrate knowledge of sport and develop and implement sport specific experiences to improve their ability to coach effectively: a) baseball, b) basketball, c) cross country, track and field, d) football, e) golf, f) soccer, g) softball, h) swimming, i) tennis, j) volleyball, or k) wrestling.

PHED 420 - Administration of School Athletic Program (3)

(3-0-3) Administrative principles and procedures applicable to school athletic programs.

PHED 423 - Exercise Management: Special Populations (3)

(3-0-3) This course will provide the students with experience in exercise management for persons with chronic disease and/or disability and to understand the integrated model of care to coordinate exercise with other aspects of health care.

Prerequisite: PHED 432

PHED 424 - Introduction to Therapeutic Exercise (3)

(3-0-3) Study and use of exercise and various techniques and modalities to rehabilitate and improve function in a variety of populations including athletes and those with orthopedic limitations.

Prerequisite: PHED 306 or BIOL 234 or BIOL 244

PHED 430 - The Psychosocial Dimensions of Sport and Physical Activity (3)

(3-0-3) Understandings regarding the psychological and sociological factors influencing performance in physical activities.

PHED 432 - Physiology of Exercise (3)

(3-0-3) Study of response of the body to muscular activity; work and efficiency, cardiorespiratory adjustment, training and fitness. Laboratory experiences are an integral part of this course.

PHED 441 - Exercise Testing and Prescription (4)

(3-2-4) Knowledge and skills in the area of fitness evaluation, exercise prescription and delivery of exercise programs to normal/special populations.

Prerequisite: PHED 432 or BIOL 234

Corequisite: PHED 441L

PHED 450 - Planning and Managing Exercise Programs (3)

(3-0-3) Emphasis upon knowledge, methods in planning, designing, managing and improving exercise programs. Provides a sound scientific basis and a practical foundation for students interested in the exercise field and for professionals in the fitness field.

PHED 453A - Corporate Practicum (3)

(0-9-3) This course will provide students with practical experiences in a corporate fitness/wellness and performance setting.

Prerequisite: PHED 432 and PHED 332 or PHED 326 or PHED 450

PHED 453B - Cardiopulmonary Rehabilitation Internship (3)

(0-9-3) This course will provide students with practical experience in a clinical based setting that includes cardiac rehabilitation.

Prerequisite: PHED 432 and PHED 441

PHED 453C - Musculoskeletal Rehabilitation Internship (3)

(0-9-3) Application of knowledge in kinesiotherapy in clinical settings, including experience in neurology, orthopedics, pediatrics, psychiatric and geriatric departments.

Prerequisite: PHED 432 and PHED 424

PHED 475 - Adapted Physical Education (3)

(2-2-3) Characteristics of exceptional students with disabilities and means whereby these students can be aided by physical education. On-site adapted physical education clinic is an integral part of the course.

Corequisite: PHED 475L

PHED 476 - Special Problems in Physical Education (1-3)

(1 to 3 hrs.) Designed to meet special needs of individual students. Intensive study of approval specific problems from an area of physical education.

PHED 477 - Internship in Coaching (3)

(0-6-3) Planning, leadership, supervision and program evaluation in coaching under qualified administrative leadership and University faculty supervision. Laboratory experiences at the interscholastic and/or intercollegiate level are an integral part of the course. Application must be made through the department chair.

PHED 480 - Workshop (1-3)

(1 to 3 hrs.) The workshop format is an interactive learning experience designed to build and/or improve specific skills with a physical education orientation. A maximum of six semester hours (with different workshop topics) may be earned under this course number.

PHED 490 - Internship in Athletic Training (6)

(0-18-6) An advanced class with hands-on experience, which is required for certification.

PHED 499D - Senior Capstone in Exercise Science (3)

(3-0-3) This course is a culminating experience in which students will review and use the knowledge, skills and abilities acquired during their undergraduate program to prepare to take the professional exams required to secure desirable employment.

PHIL - Philosophy

PHIL 100 - Beginning Philosophy (3)

(3-0-3) An introduction to the philosophical study of assumptions, ideas and arguments about reality, knowledge, value and beauty. This course satisfies the Level 2 Knowledge HUM requirement for general education.

PHIL 103 - Beginning Ethics (3)

(3-0-3) An introduction to the basic principles and theories of ethics, and their application to selected moral issues and cases from the past and present. Selected for study will be some of the following: equality, affirmative action, minority rights (women, American Indians, Latinos, Asians, gays), medical and biological ethics, religion and morality, law and morality, business ethics, military ethics, war and terrorism, abortion, euthanasia, capital punishment, poverty and welfare, sexual moralities, marriage and family, liberty and drug use, pornography, censorship, lying and cheating. This course satisfies the Level 3 Ethics and Civic Engagement SBS requirement for general education.

PHIL 106 - Beginning Logic (3)

(3-0-3) An introduction to the basic elements of logic, including deductive and inductive reasoning, designed to enhance one's ability to discover and evaluate logical structure in various media. This course satisfies the Level 3 Global Cultures HUM requirement for general education.

PHIL 200 - Introduction to Philosophy (3)

(3-0-3) An introduction to some of the central problems of philosophy, such as problems about free will, personal identity, knowledge, the nature of reality, right and wrong, and the meaning of life.

PHIL 303 - Ethics (3)

(3-0-3) An examination of moral principles and their application to selected issues, which may include bio-medical ethics, abortion, euthanasia, capital punishment, affirmative action, poverty and hunger, sexual morality, marriage, lying, cheating, lifestyle and personality and business practices.

PHIL 307 - Philosophy of Religion (3)

(3-0-3) Basic issues in philosophy of religion. For example: Are there good arguments for or against the existence of the God worshiped by traditional theists (Judaism, Christianity, Islam)? Why is there evil? What is the relationship between faith, revelation and evidence? Do people survive death?

PHIL 308 - Philosophy of the Arts (3)

(3-0-3) Major theories of art, aesthetic experience, the structure of art, problems in aesthetics and art criticism.

PHIL 313 - American Philosophy (3)

(3-0-3) Examination of the writings of leading representatives of American philosophy with special emphasis on the writings of the "classical" period.

PHIL 320 - Asian Philosophy (3)

(3-0-3) An examination of the major philosophical theories of Hinduism, Buddhism, Confucianism and Taoism. Equates with IST 321.

PHIL 321 - The Meaning of Life (3)

(3-0-3) An investigation of various aspects of the philosophical problem of the meaning of life.

PHIL 333 - Animal and Environmental Ethics (3)

(3-0-3) An introduction to environmental ethics. Consideration to ethical theories and values as they apply to the natural environment. Emphasis on ethical aspects of such practical issues as preserving wilderness areas and

wetlands, species extinction, population dynamics, forestry and mining policies, waste disposal, recycling, animal rights and liberation, domestic uses of animals and pets, sustainable agriculture, pesticide and herbicide usage, the status of embryos, genetics, biotechnology, animals as food, animal experimentation, economics, and the impact of environmental policies on diverse cultures and developing nations.

PHIL 341 - Philosophy and Death (3)

(3-0-3) An exploration of the central philosophical questions concerning death: What is death? Is death good, bad, or neutral? Is death something to be feared? What happens after we die?

PHIL 351 - Philosophy of Love and Sex (3)

(3-0-3) An exploration of the central philosophical questions concerning love and sex, with reference to classical and contemporary sources: What is love? Why do we love people? Are there different kinds of love? What is sex? What makes sex bad or good, right or wrong? What is the relationship between sex and love, if any? Equates with GST 351.

PHIL 355 - Ancient and Medieval Philosophy (3)

(3-0-3) The history of Western philosophy from its ancient origins through the medieval period and the beginning of the Renaissance.

PHIL 356 - Modern and Contemporary Philosophy (3)

(3-0-3) A history of Western philosophy from Renaissance to the present.

PHIL 361 - Social and Political Philosophy (3)

(3-0-3) An exploration of the central issues in social and political philosophy, such as the nature of justice, equality, freedom, political authority and the relationship between politics, religion and ethics.

PHIL 389 - Honors Seminar in Philosophy (3)

(3-0-3) Contemporary moral issues are examined, discussed and evaluated. The topics may vary from semester to semester.

PHIL 399 - Special Class (1-3)

(1 to 3 hrs.) These courses are usually specialized offerings in philosophy for the advanced undergraduate student. The purpose of these courses is to enhance the existing program in philosophy.

PHIL 400 - Philosophy of Science (3)

(3-0-3) An examination of basic issues in the philosophy of science, such as scientific progress and cumulativeness, the nature of scientific explanation, the nature of scientific evidence, scientific realism, the relation between theory and observation, and the relation between science and value.

Prerequisite: Minimum one course in philosophy or permission of instructor

PHIL 403 - Ethical Theory (3)

(3-0-3) Study and analysis of selected issues and readings in moral philosophy. May include normative ethics, metaethics, moral epistemology and/or value theory.

Prerequisite: One course in PHIL

PHIL 410 - Current Philosophy (3)

(3-0-3) An examination, interpretation, and evaluation of the ideas of prominent contemporary philosophers.

Prerequisite: One course in PHIL or permission of instructor

PHIL 412 - Symbolic Logic (3)

(3-0-3) An introduction to symbolic logic: How can we use symbols to represent claims and test arguments? What are the philosophical implications of contemporary developments in symbolic logic?

PHIL 420 - Metaphysics (3)

(3-0-3) An examination of the ultimate nature of reality, including (for example) the nature of time, space and causation, the nature of identity and substance, the relation between particulars and universals, and the nature of mind and freedom.

Prerequisite: One course in PHIL or permission of instructor

PHIL 430 - Epistemology (3)

(3-0-3) An introduction to the central issues in epistemology: What is knowledge? When are beliefs rational, warranted or justified? Do we know anything? How?

Prerequisite: One course in PHIL or permission of instructor

PHIL 476 - Special Problems (1-3)

(1 to 3 hrs.) The student selects an approved topic in philosophy on which to do a directed study.

PHIL 499C - Senior Seminar in Philosophy (3)

(3-0-3) Examination, in a seminar setting, of issues and opportunities for philosophy majors.

Prerequisite: 15 hours in PHIL

PHYS - Physics

PHYS 105 - Introduction to Physics and Engineering Professions (1)

(0-2-1) An exploration of career opportunities in physics and engineering including professional vignettes and guest speakers. Students will learn what skills are necessary to succeed in the profession. Topics that will be explored as a series of laboratory explorations include fundamental units and concepts, computational tools, and communication skills (graphical, written, and verbal).

PHYS 109 - History of the Universe (3)

(3-0-3) A conceptual approach to the ideas of modern astrophysics and cosmology for nonscientists. The ideas of classical physics. Einstein's theory of relativity, quantum mechanics, fundamental particles and forces, matter and antimatter, modern cosmology and the Big Bang theory will be explored. This course satisfies the Level 2 Knowledge NSC requirement for general education.

PHYS 110 - Concepts in Astronomy (3)

(3-0-3) An introduction to the study of astronomical phenomena: motions of the sky, planetary science, the sun as a star, solar astrophysics, stars and stellar evolution and cosmology - the structure and evolution of the universe.

PHYS 123 - Concepts and Experiences in Energy (3)

(3-0-3) An interdisciplinary approach to the study of energy. Incorporates experiences and concepts from motion, heat, light, magnetism, electricity, radioactivity and sound waves. Equates with ETM 123, SCI 123 and SSE 123. This course satisfies the Level 2 Knowledge NSC requirement for general education.

PHYS 181 - Introduction to Scientific Computing (3)

(2-2-3) An introductory computing course emphasizing fundamental computing tools and techniques and their application to solving scientific problems. Topics include generating algorithms for solving problems, understanding C++ syntax, writing and modifying C++ programs in the context of solving scientific problems, and analyzing program output.

Prerequisite: "C" or better in PHYS 105 or "C" or better in MATH 152 or minimum ACT Math subscore of 22

Corequisite: PHYS 181L

PHYS 199 - Special Class (1-6)

(1 to 6 hrs.)

PHYS 201 - Elementary Physics I (4)

(3-2-4) An introduction to physics for applied science majors. Topics include concepts of mechanics, encompassing both kinematics and dynamics, Newton's laws of motion, work and energy, impulse and momentum, gravitation, rotation and torque. Additional topics include fluid dynamics, thermodynamics, waves and sound.

Prerequisite: "C" or better in MATH 152, ACT Math subscore of 22, or MATH 174 or MATH 175

Corequisite: PHYS 201L

PHYS 201A - Elementary Physics I Lab (1)

(0-2-1) Laboratory for PHYS 201.

Prerequisite: PHYS 201

PHYS 202 - Elementary Physics II (4)

(3-2-4) An introduction to physics for applied science majors. A continuation of PHYS 201. Topics include concepts of electric charge and force on charged particles, electric and magnetic fields and flux, electric potential, Gauss's law, resistance, capacitance, Ohm's Law, Kirchhoff's rules, electromagnetic waves, the nature of light, and geometric optics. Additional topics include nuclear and atomic physics.

Prerequisite: "C" or better in PHYS 201

Corequisite: PHYS 202L

PHYS 202A - Elementary Physics II Lab (1)

(0-2-1) Laboratory for PHYS 202.

Prerequisite: PHYS 202

PHYS 203 - Fundamentals of Physics (4)

(4-0-4) This course surveys general principles of physics. Includes topics such as motion, force, energy, fluids, electricity and magnetism, and optics. This course is intended for students in the technology and teaching fields. Students will gain an understanding of the physical and mathematical principles involved in everyday life and technology.

Prerequisite: MATH 141, MATH 152, MATH 174, or ACT Math subscore of 22 or higher

PHYS 211 - Circuits (4)

(3-2-4) Linear circuits consisting of passive and active circuit elements; sinusoidal-forcing functions and phasors; steady-state response.

Prerequisite: MATH 275

Corequisite: PHYS 211L and PHYS 232

PHYS 221 - Statics (3)

(3-0-3) Vector algebra, moments of force, equivalent force systems, equilibrium, trusses, frames, beams, friction, centroids and moments of inertia.

Prerequisite: MATH 275 and PHYS 231

PHYS 231 - Engineering Physics I (5)

(4-2-5) Introduction to physics for scientists and engineers. Topics include concepts of mechanics, encompassing both kinematics and dynamics, Newton's laws of motions, work and energy, impulse and momentum, gravitational fields, rotational kinematics and dynamics, and torque. Additional topics include fluid dynamics, thermodynamics, waves and sound.

Corequisite: MATH 275 and PHYS 231L

PHYS 231A - Engineering Physics I Lab (1)

(0-2-1) Laboratory for PHYS 231.

Corequisite: PHYS 231

PHYS 232 - Engineering Physics II (5)

(4-2-5) Introduction to physics for scientists and engineers. A continuation of PHYS 231. Topics include electric charge and forces on charged particles, electric fields, Gauss's Law, magnetic
fields, Ampere's law, resistance, capacitance, electric potential, Ohm's law, Kirchhoff's rules, EMF, Lenz's law, Maxwell's equations, electromagnetic waves, the nature of light, Snell's law and geometric optics. Additional topics include nuclear and atomic physics.

Prerequisite: "C" or better in PHYS 231

Corequisite: PHYS 232L

PHYS 232A - Engineering Physics II Lab (1)

(0-2-1) Laboratory for PHYS 232.

Corequisite: PHYS 232

PHYS 239 - Cooperative Education (1-8)

(1 to 8 hrs.) Participation in supervised work experience in a professional environment.

PHYS 299 - Special Class (1-6)

(1 to 6 hrs.)

PHYS 324 - Principles of Radio Astronomy (3)

(3-0-3) A study of astrophysically interesting phenomena utilizing the techniques of the science of radio astronomy; topics include galactic structure, radio galaxies, cosmic jets and black holes, interstellar molecules and instrumentation in radio astronomy, with a major emphasis in the methods of research in experimental astrophysics. Equates with ASTR 324 and SSE 324.

Prerequisite: PHYS 232 and ASTR 125

PHYS 332 - Electricity and Magnetism I (3)

(3-0-3) A study of the fundamentals of electromagnetism. Topic include: electric forces, electric fields and electric potential; special techniques for electric potentials: method of images and multipole expansion; electric fields in matter, dielectrics; magnetic forces, magnetic fields and magnetic vector potential; magnetic fields in matter.

Prerequisite: PHYS 232 and MATH 276

PHYS 333 - Electricity & Magnetism II (3)

(3-0-3) A continuation of PHYS 332 focused on the study of electrodynamics and electromagnetic waves. Topics include: electromotive force, induction and Maxwell's equations; conservation laws; electromagnetic waves in vacuum and matter, absorption and dispersion; potentials and fields; radiation; relativistic electrodynamics.

Prerequisite: "C" or better in PHYS 332

PHYS 339 - Cooperative Education (1-8)

(1 to 8 hrs.) Participation in supervised work experience in a professional environment.

PHYS 340 - Experimental Physics (3)

(1-4-3) Selected experiments from classical and modern physics. Computer analysis and simulation.

Prerequisite: PHYS 232

Corequisite: PHYS 340L

PHYS 350 - Nuclear Science (4)

(3-2-4) An interdisciplinary course in nuclear science and technology. Topics include nuclear and particle physics, radioactive decay processes, radiation interaction with matter, biological effects of radiation, human exposure to radiation, dose calculations, nuclear medicine, industrial and nuclear power applications, and radiation related science and society issues.

Prerequisite: PHYS 202 or PHYS 232

Corequisite: PHYS 350L

PHYS 353 - Modern Physics I (4)

(4-0-4) An introduction to the fundamentals of special relativity and quantum mechanics. Topics include relativistic kinematics and dynamics, the dual nature of light and matter modeled as both waves and particles, Schrödinger's equation applied to bound and unbound states.

Prerequisite: PHYS 232

PHYS 354 - Modern Physics II (3)

(3-0-3) An introduction to quantum properties of light and matter with applications pertaining to modern physics. Topics include the hydrogen atom, spin and angular momentum, atomic, molecular and nuclear physics, statistical physics, lasers and solid state physics, fundamental particles and interactions.

Prerequisite: PHYS 353

PHYS 361 - Fundamentals of Electronics (3)

(2-2-3) A survey of electronics: components, basic circuits, transducers, op-amps, digital circuits, microprocessors and interfacing.

Prerequisite: One of the following: 1. PHYS 202 and PHYS 202A or 2. PHYS 232 and PHYS 232A

Corequisite: PHYS 361L

PHYS 381 - Computer Solutions to Engineering and Science Problems (3)

(3-0-3) Applications of computer programming to problems in engineering and physics. Problems will be selected from statics, dynamics, mechanics of materials, thermodynamics, and electricity and magnetism, with an extended problem selected from the student's major area of interest.

Prerequisite: PHYS 232 and PHYS 181

PHYS 399 - Special Class (1-6)

(1 to 6 hrs.)

PHYS 410 - Solid State Physics (3)

(3-0-3) Lattice dynamics, electrons in metals, semiconductors, and dielectric and magnetic properties of solids.

Prerequisite: PHYS 353

PHYS 411 - Thermodynamics (3)

(3-0-3) First and second laws of thermodynamics, power and refrigeration cycles, statistical thermodynamics, relations among properties and equations of state.

Prerequisite: PHYS 231

PHYS 412 - Light and Physical Optics (3)

(3-0-3) Dualistic nature of light; interference, refraction, reflection, diffraction, polarization, laser action and spectra.

Prerequisite: PHYS 232

PHYS 417 - Physics of Quantum Computing (3)

(3-0-3) An introduction to the quantum mechanical foundations of quantum communication and quantum computing. Topics include energy quantization, wave-particle duality, Heisenberg uncertainty, simple quantum devices, quantum superposition and entanglement, quantum teleportation, quantum copying, and finally quantum communication and quantum computing.

Prerequisite: "C" or better in PHYS 353

PHYS 431 - Space Plasma Physics (3)

(3-0-3) An introduction to plasma physics and its applications to space and astrophysical systems, with an emphasis on the Earth's environment in space. Topics will include the motion of charged particles in electromagnetic fields, the description of plasmas in the framework of one- and two-fluid approach, and its description in the framework of kinetic theory. Plasma equilibria, waves, and instabilities will also be discussed.

Prerequisite: PHYS 232

PHYS 439 - Cooperative Education (1-8)

(1 to 8 hrs.) Participation in supervised work experience in a professional environment.

PHYS 452 - Nuclear Physics (3)

(3-0-3) Binding energies, nuclear forces, transmutation of nuclei, natural and artificial radioactivity.

Prerequisite: PHYS 353

PHYS 476 - Special Problems (1-6)

(1 to 6 hrs.) Topic to be approved prior to registration.

PHYS 483 - Classical Mechanics (4)

(4-0-4) A study of the motion of bodies and the forces that affect the objects. The Lagrange's and Hamilton's equation of motion of simple systems will be studied. Topics include kinematics and dynamics of particles and rigid bodies; work and energy; impulse and momentum; Lagrangian and Hamiltonian mechanics.

Prerequisite: PHYS 231 and either MATH 276 or MATH 363

PHYS 493 - Quantum Mechanics (3)

(3-0-3) The wave function; Hermitian operators and angular momentum; Schrodinger's equation, barriers, wells, harmonic oscillators and the hydrogen atom.

Prerequisite: PHYS 353 and MATH 363

PHYS 497 - Senior Research 1 (3)

(1-4-3) Students will conduct a directed research project in consultation with a faculty advisor. The student will propose and design an experiment designed to test a scientific problem. The goal is to complete the experimental design, data collection, and analysis using appropriate scientific literature and skills. This research project will be finalized and culminate in a scientific paper and oral presentation in PHYS 498. The lecture portion of the course will address elements of scientific research (literature searches and search engines for physics, basic elements of good scientific writing, and scientific presentations) and career skills (resume writing for STEM fields, interview skills, job opportunities and searches physicists in industry, research, and education fields).

Corequisite: PHYS 497L

PHYS 498 - Senior Research II (2)

(1-2-2) A continuation of PHYS 497/497L. Students will complete the research project started in PHYS 497/497L. This includes completion of data collection and analysis, a completed scientific paper and a final oral presentation. The lecture portion of the course will address writing scientific papers and giving scientific presentations.

Prerequisite: PHYS 497/497L

Corequisite: PHYS 498L

PHYS 499 - Special Class (1-6)

(1 to 6 hrs.)

PHYS 499C - Capstone and Senior Thesis I (2)

(2-0-2) Designed to give the student an introduction to research and literature in mathematics, computer science or physics. This course is equated with CS 499C and MATH 499C. Prior to registration, students must file a Thesis Proposal Form in the Department of Physics, Earth Science, & Space Systems Engineering.

PHYS 499D - Capstone and Senior Thesis II (1)

(1-0-1) A formal report that includes the basic literature search and appropriate original work will be prepared in a form suitable for submission to a scientific journal. A technical oral presentation of the research will be made to the department. In addition, an oral or poster presentation at a local, state, regional or national meeting will be required.

Prerequisite: PHYS 499C

POLS - Political Science

POLS 100 - Introduction to Politics (3)

(3-0-3) This course introduces students to the major issues and features of American government, international relations, comparative government and political theory. By presenting students with an array of problems and controversies specific to the four main subfields of political science, the course aims not only to give students an overview of the discipline by presenting to them some of the most pressing problems, domestic and international. The course also aims to equip students with knowledge that will help them understand American politics as well as international affairs outside the classroom. This course satisfies the Level 2 Knowledge SBS requirement for general education.

POLS 110 - Introduction to Political Theory (3)

(3-0-3) An introductory course in political philosophy with an emphasis on familiarity with concepts of human nature, society, democracy and revolution. This course satisfies the Level 3 Global Cultures HUM requirement for general education.

POLS 140 - United States Government (3)

(3-0-3) This course introduces students to major features of American government: The Declaration of Independence and Constitution; American ideals including equality and civil liberties; key inflection points in the country's development; the institutions of U.S. government and their operation; non-institutional features of government including public opinion, interest groups, and political parties; and foreign and domestic policy issues of contemporary concern. This course satisfies the Level 2 Knowledge SBS requirement for general education.

POLS 177 - Public Service through Science (3)

(3-0-3) Citizenship brings the responsibility to be involved in public life. Understanding and being involved in one's community provides an important opportunity to use one's knowledge and skills for the benefit of others. This course provides students with an overview of national, state, and local government and identifies a range of opportunities to participate in the decision-making and policy processes at each level. Students will learn how they can use their STEM knowledge to give back to their communities by helping shape public policies that enhance quality of life. This course satisfies the Level 3 Ethics and Civic Engagement SBS requirement for general education.

POLS 200 - Methods of Political Inquiry (3)

(3-0-3) An introduction to the basic concepts and methods of the logic of political inquiry and empirical research, with an emphasis on understanding the fundamental perspectives of political inquiry and the use of basic empirical and computer techniques to conduct political inquiry.

POLS 230 - Introduction to Comparative Politics (3)

(3-0-3) An introduction to the concepts and themes of comparative government, showing the evolution of political systems, and their response to problems of organization, order and governance.

POLS 242 - State and Local Government (3)

(3-0-3) A study of the nature, organization, powers and functions of American state and local governments.

POLS 262 - U.S. Foreign Policy (3)

(3-0-3) This course will provide an extensive overview of U.S. foreign policy execution and outcomes and historic events from the end of the Second World War to the present day. The course is divided into segments designed to consider theoretical, institutional and thematic focal points of American foreign policy during the past 60 years. This course satisfies the Level 3 Ethics and Civic Engagement SBS requirement for general education.

POLS 311 - Politics, Justice and the Good Life (3)

(3-0-3) A study of the relationship between a society's ideas and practices of the good, the true and the beautiful and its ideas about politics and political life.

POLS 312 - Classical and Medieval Political Thought (3)

(3-0-3) A study of the tradition of western political thought from its origins in Greek antiquity to the Christian Middle Ages.

POLS 314 - American Political Thought (3)

(3-0-3) A study and discussion of American political ideas as they are expressed in a variety of sources, including pamphlets, literature, poetry, autobiography and political philosophy.

POLS 316 - Modern Political Thought (3)

(3-0-3) A study of classic works of modern political thought from the fifteenth century to the nineteenth century.

POLS 317 - Feminist Political Thought (3)

(3-0-3) History and development of feminist political thought. Perspectives may include those of Friedan, Fuller, Millet, Collins, MacKinnon and Irigiray.

POLS 318 - Contemporary Political Thought (3)

(3-0-3) A study of the major developments in 20th century social and political theory, which may include trends in liberal thought, critical theory, psychoanalysis, post-modernism and conservatism.

POLS 319 - Islamic Political Thought (3)

(3-0-3) This course will trace the general history of political thought within the Islamic tradition by focusing on selections of readings from some combination of classical and/or contemporary writings in Islamic Political Thought.

POLS 321 - Constitutional Law: Governmental Powers (3)

(3-0-3) A study of the development, origins, and current character of the U.S. Constitution, with particular attention to separation of powers and federal-state relations.

POLS 322 - Courts and Civil Liberties (3)

(3-0-3) A study of the federal and state court systems and of the Bill of Rights and the 14th Amendment, with particular attention to questions of freedom of speech, religion and association; due process of law; privacy; and discrimination.

POLS 324 - Environmental Law and Policy (3)

(3-0-3) A study of the political and legal aspects of major environmental policies including the impact of energy policies on environmental health and safety.

Prerequisite: POLS 140

POLS 325 - Federalism and the Constitution (3)

(3-0-3) This course provides a comprehensive understanding of the concepts and principles of intergovernmental relations with special focus on U.S. government and federalism. The system of federalism in the U.S. is examined in terms of American institutions at all levels of government and the complex web of public and private sector organizations that form the intergovernmental actors in the policy making process. Upon completion of

this course, students will be able to understand federalism and intergovernmental relations and their relationship to U.S. political process, the constitutional foundations at state and federal levels, and the U.S. system of law.

POLS 328 - Law, Government and Privacy in the Internet Age (3)

(3-0-3) An in-depth study of information gathering policies and procedures with an examination of the technologies, agencies and organizations which shape them. Privacy legislation and competing values affecting information policy will be discussed, and students will have the opportunity to develop skill in online research in government documents.

POLS 329 - Comparative Constitutional Law and Politics (3)

(3-0-3) A comparative cross-national study of constitutional law and politics with particular emphasis on governmental powers and individual rights issues in the United States, Great Britain, Canada and Germany.

POLS 330 - European Parliamentary Democracies (3)

(3-0-3) A study of the constitutional development, political organization, legislatures, administration, and courts of the governments of the United Kingdom, France and Germany.

POLS 331 - Politics of the Middle East and North Africa (3)

(3-0-3) Analysis of major themes and cases in Middle Eastern/North African Politics. Includes issues of religion, ethnic conflict, modernization and democratization.

POLS 332 - Politics of Latin America and the Caribbean (3)

(3-0-3) Analysis of major themes and cases in Latin American/Caribbean politics. Includes issues of debt, development and democratization.

POLS 333 - Politics of Sub-Saharan Africa (3)

(3-0-3) Analysis of major themes and cases in African politics. Includes issues of debt, development and democratization.

POLS 334 - Politics of Russia and Eastern Europe (3)

(3-0-3) A study of the Russian political system; ideological base, governing structures and political processes; and an analysis of the major Eastern European governments and their political life.

POLS 335 - Politics of Development and Democratization (3)

(3-0-3) Thematic study of political, economic and social problems in developing and newly industrialized countries, with emphasis on democratization and development strategies.

POLS 336 - North American Politics: United States and Canada (3)

(3-0-3) A comparative study of the governments and politics of the United States and Canada, their political cultures, public opinion, interest groups and political parties; the evolution, structure and operation of their governments, the behavior of their public officials, and their public policies.

POLS 337 - Politics of Asia (3)

(3-0-3) Survey of politics in China, Japan, India and Vietnam. Emphasis on themes of traditional order and its collapse and persistence. Development of Asian nationalism and clash between Marxist revolution and evolutionary democracy.

POLS 338 - Politics of Transition (3)

(3-0-3) Analysis and discussion of change in political structures and institutions including changes from military to democratic forms and the impact of economic liberalization.

POLS 342 - The American Presidency (3)

(3-0-3) A study of the presidency in American politics emphasizing the Constitution, presidential selection, presidential power, interbranch relations, role of the public, psychological theories of the presidency and presidential policy-making.

POLS 343 - Political Parties and Elections (3)

(3-0-3) A study of the nature and role of parties and interest groups; party structure and development, functions of primaries, nomination system and campaign methods and policy-making.

POLS 344 - Kentucky Government (3)

(3-0-3) A study of the nature, organization, powers and functions of Kentucky state government.

POLS 345 - Congress and the Federal Bureaucracy (3)

(3-0-3) A study of the role of Congress and federal bureaucracy in American government. Emphasis is placed on historical and comparative analysis of these institutions since 1950.

POLS 350 - Political Behavior (3)

(3-0-3) A study of mass and elite political behavior including political socialization, attitudes and opinions; voting behavior; and government decision making.

POLS 351 - Public Administration (3)

(3-0-3) A study of the historical evolution, theory of organization and administration, and the personnel, financial and legal aspects of public administration.

POLS 352 - American Public Policy (3)

(3-0-3) A study of major national domestic and foreign policy problems, including health, education, labor, transportation, defense and national security, focusing on their nature, formulation, implementation and impact.

POLS 353 - Public Personnel Administration (3)

(3-0-3) A study of personnel utilization; concepts, principles and practice of the merit system; leadership; decision-making processes; and motivation of public employees.

POLS 354 - African-American Politics (3)

(3-0-3) A study of 20th century African-American legal and political action with particular emphasis on the Civil Rights Movement and political conflicts over racial equality in education, public accommodations, voting, housing and employment.

POLS 355 - Women and Politics (3)

(3-0-3) Participation of women in American government. Gender differences in political attitudes and voting; impact of electoral laws on election of women; and impact of women on creation and implementation of policy.

POLS 360 - International Relations (3)

(3-0-3) A study of international relationships in theory and practice; concepts of power and its application; machinery of foreign policy making and implementation; world politics and law; and the world community.

POLS 361 - Globalization and its Discontents (3)

(3-0-3) This course will examine the main institutions of globalization; the International Monetary Fund, World Bank, and World Trade Organization. Principles of comparative advantage, international trade, and state-market relations will be covered. Students will gain an understanding of forces that shape outcomes in the global economy within a wide range of issues such as trade, finance, wealth distribution, international development, human security, and cultural norms.

POLS 362 - Current World Problems (3)

(3-0-3) A study of major international problems since World War II, with emphasis on Russian-American relations, regional political conflicts, and major world issues including food, population and human rights policies.

POLS 365 - United Nations and World Organizations (3)

(3-0-3) A study of the evolution of international organizations from the League of Nations to the United Nations and of the contemporary problems and issues of present world organizations.

POLS 367 - Politics of International Economic Relations (3)

(3-0-3) Study of essential issues and contending analytical frameworks. Includes examination of politics of economic relations of the U.S., Japan, Europe, and between the "North" and "South."

POLS 368 - Human Rights and Global Justice (3)

(3-0-3) A study of the human rights idea; human rights movement; national and international human rights charters and organizations; political, civil, social and economic rights; rights of women, children and minorities; and human rights remedies for collective violence, genocide and terrorism.

POLS 369 - Political Geography (3)

(3-0-3) A study of the principles and concepts of political geography and their application to an understanding of political phenomenon worldwide.

POLS 373 - Introduction to Women's Studies (3)

(3-0-3) A survey course designed to develop students' awareness of women's literature, poetry, contributions to science and history, as well as an introduction to feminist theory. Women scholars of all nations and races will be highlighted.

POLS 379 - Honors Seminar (3)

(3-0-3) An analysis and discussion of political ideas, institutions and policies. Topics will vary from semester to semester.

POLS 381 - Evolution of the U.S. Intelligence Community (3)

(3-0-3) A study of the evolution of the U.S. intelligence community from the American founding to the present.

POLS 382 - Intelligence Process (3)

(3-0-3) This course focuses on the key questions in the U.S. intelligence community and its role in homeland security, national defense, and international affairs, with a focus on policy, oversight and intelligence support. The course will examine issues of collection, analysis, sharing and dissemination of information within and between local, state, and federal government agencies and the private sector.

POLS 383 - Counterintelligence (3)

(3-0-3) An overview of the counterintelligence discipline; the structure and operations of the United States counterintelligence community, including its legal foundation and the privacy and civil liberties implications of counterintelligence operations.

POLS 384 - Intelligence Analysis (3)

(3-0-3) This course examines processes used at local, state and federal levels to conduct intelligence analysis and develop intelligence products. Includes advanced instruction in intelligence structured analytic techniques.

POLS 385 - Terrorism and Political Violence (3)

(3-0-3) This course offers a basic introduction to terrorism and political violence: the history of terrorism, how it functions, the ideology of those groups currently posing the greatest threat to the U.S., challenges posed by various approaches to countering the threat of terrorism, and so forth.

POLS 386 - Comparative Counterterrorism (3)

(3-0-3) This course will examine the counterterrorism strategies and approaches used by various states to combat domestic, foreign, transnational, and state terrorism including how these states deal with issues related to defining, preventing, and combating terrorism. Countries may include the U.S., Canada, Israel, and Britain. This course may also survey the strategies and approaches of non-Western states including, but not limited to, China, Nigeria, India, Pakistan, and Russia.

POLS 387 - National Security Strategy (3)

(3-0-3) This course focuses on U.S. National Security Strategy in the post-Cold War era. The course examines the difficulties involved in defining the terms "National Security" and "National Interest." Following that, students review the literature on Grand Strategy - focusing on how U.S. foreign policy is crafted, the difficulties involved in marshaling diplomatic and military means in service to a coherent strategy, and how grand strategy is implemented in theory. Finally, the class turns to an examination of U.S. Grand Strategy after the fall of the Berlin Wall, paying close attention to the nature of the threat revealed by 9/11 and U.S. efforts to meet it.

POLS 388 - Comparative Foreign Policy (3)

(3-0-3) This course provides an intensive introduction to the study of foreign policies in a comparative context. Topics treated include the nature of the international system, how states conceive of their interests and craft foreign policies to realize those interests, the historical development of U.S. foreign policy, and the foreign policy priorities of key actors in the international system today.

POLS 399 - Special Topics in Political Science (3)

(3-0-3) Special courses which supplement regular course offerings. May be repeated if the subtitle indicates a different course is being offered.

POLS 410 - Seminar in Political Theory (3)

(3-0-3) This course is an upper division undergraduate survey of the fundamental questions of political life through an examination of major works across the tradition of political philosophy: ancient, medieval, modern and contemporary.

POLS 420 - Seminar in Public Law (3)

(3-0-3) This upper-division undergraduate survey course will use major works in the political science and law literature for advanced study of the dominant questions, theories and research methods of the discipline sub-field of public law.

POLS 430 - Seminar in Comparative Politics (3)

(3-0-3) This course is an upper division undergraduate survey of the discipline subfield of comparative politics - its dominant questions, theories, and research methods - by way of an intensive study of the countries and the politics of a particular geographic region.

POLS 440 - Seminar in American Politics (3)

(3-0-3) This course is an upper division undergraduate survey of the Constitution, institutions, and politics of American government through an examination of major works across the political science literature.

POLS 451 - Seminar in Bureaucracy and Public Management (3)

(3-0-3) This course provides an advanced understanding of the concepts and principles of bureaucracy and public management, with special focus on bureaucratic policy, executive institutions and administrative agencies responsible for the formation and execution of public policy.

POLS 460 - Seminar in International Relations (3)

(3-0-3) This course is an upper division undergraduate survey of the international relations field through an examination of major works across the political science literature. Students will undergo a study of international relations theory and practice, concepts of power and its application, machinery of foreign policy making and implementation, world politics and law, and the world community.

POLS 476 - Independent Study in Political Science (1-3)

(1 to 3 hrs.) Original research project or readings in a particular subject area of government and politics. Open only to political science majors and government minors with junior/senior standing.

POLS 492 - Washington Center Seminar Program (3)

(3 hrs.) A two-week intensive study course in Washington, D.C., during January, May, or August on major current legal, political, domestic and foreign policy issues.

Prerequisite: POLS 140

POLS 494 - Washington Center Internship Program (3-15)

(3-15 hrs.) A semester-long work study experience in a congressional or administrative agency office in Washington, D.C. Only six semester hours of this internship may be used in satisfaction of political science major or government minor elective credit.

Prerequisite: POLS 140

POLS 496 - Frankfort Legislative Internship Program (15)

(15 hrs.) Five months of work study experience with the Kentucky General Assembly during its biennial sessions. Open to all MSU students, but the selection of interns will be made by program personnel.

Prerequisite: POLS 140

POLS 498 - Local, State, National and International Government Internship (3-15)

(3 to 15 hrs.) Only six hours will count toward political science major or government minor. A supervised work study experience in local, state, national and international government.

Prerequisite: POLS 140

POLS 499C - Senior Seminar (3)

(3-0-3) A capstone course for senior political science majors in which students will read and analyze specialized literature in political science, conduct research projects and formally present their research findings.

Prerequisite: POLS 110, POLS 140, and POLS 200

PPOL - Public Policy

PPOL 205 - Conducting Public Policy Research (3)

(3-0-3) This course introduces the process of designing and conducting research for informing public policy. Models and theories underlying effective public policy research are discussed. Basic skills of database creation, management and analysis are introduced along with advanced word processing and visualization. The class also exposes students to more specific graphing, statistics and mapping tools needed for public policy analysis.

PPOL 220 - Introduction to Development Policy (3)

(3-0-3) This course provides the historical context, as well as the concepts, theories and practices necessary for understanding public policy and development in communities and regions. These concepts, theories and practices are commonly used in government, the private sector, nonprofit organizations and academia. Three major areas of public policy and development are encompassed by the course: society and culture, nature and the environment, and planning and the economy. An interdisciplinary approach is emphasized to provide students with a foundation for understanding the social, political and environmental contexts of development situations and their relationships to public policy.

PPOL 230 - Introduction to Justice Policy (3)

(3-0-3) What is justice? There are many notions of what justice might mean, its origins, and how disparities in justice might be the source of social problems, unrest and dissatisfaction. This course is intended to help students identify, understand and apply perspectives of justice in society with a view to creating and implementing public policy.

PPOL 399 - Selected Topics in Public Policy (3)

(3-0-3) This course will examine selected topics such as sustainable development, political economy of development, justice policy and practice, or other public policy areas. This course offers greater depth of treatment in these topical areas and supplements regular course offerings. It may be repeated if the subtitle indicates different content is being offered.

PPOL 400 - Ethics in Public Policy (3)

(3-0-3) This course is a study of ethics and ethical issues as they pertain to American public policy. Fundamental ethical questions will be examined along with several major ethical theories and professional codes of conduct. These theories will be applied to ethical dilemmas that arise in a variety of public policy arenas. Through the application of theory to practical case studies, students will acquire the ability to recognize ethical issues in public policy and think ethically using a variety of intellectual frameworks within the parameters set by government agencies and nonprofit organizations.

PPOL 499C - Senior Seminar in Public Policy (3)

(3-0-3) This course provides a synoptic integration of the diverse field of public policy, including the range of issues raised and methods for understanding and addressing them. Students will engage in a comprehensive assessment of the field, including its foundations, history, development and current practice. This course will deepen students' understanding of the fundamental theoretical issues that are common across policy domains and will afford the opportunity to reflect upon the diverse epistemological approaches used by various academic disciplines in the natural sciences, humanities and social sciences, all of which inform the development of just public policy in the service of the common good of society.

PS - Political Science

PS 401 - Political Science Seminar (3)

(3-0-3) This undergraduate seminar in political sciences provides advanced topical treatment of one of the subfields in political science.

PSY - Psychology

PSY 121 - Introduction to Brain and Behavior (3)

(3-0-3) The course provides a basic understanding of the biological basis of mental processes and behavior. The course will focus on the relations among brain function, psychological processes and behavior. Topics will include anatomical and functional organization, higher brain functions and disorders. Equates with NEUR 121. This course satisfies the Level 2 Knowledge NSC requirement for general education.

PSY 154 - Introduction to Psychology (3)

(3-0-3) Course includes the application of psychological theories and principles in such major areas of psychology, including abnormal, biological, clinical, cognitive, developmental, personality, learning, sensation and perception, and social; in addition to the understanding of methods used in psychological research. This course satisfies the Level 2 Knowledge SBS requirement for general education.

PSY 156 - Life Span Developmental Psychology (3)

(3-0-3) Covers developmental theories, principles and characteristics of individuals across the major developmental periods: prenatal, infancy and childhood, adolescence and adulthood.

Prerequisite: PSY 154

PSY 157 - Psychology of Adjustment (3)

(3-0-3) Overview of processes and adaptation and personal adjustment in family, group and work settings. Personality theories of Erikson, White and others applied to process of developing for the individual a sense of competence and means of resolution of crises during life cycle.

Prerequisite: PSY 154

PSY 199 - Workshop (1-3)

(1 to 3 hrs.) Workshop for specifically designated task orientation in psychology. May be repeated in additional subject areas. Maximum of six semester hours may be earned under this course number.

PSY 223 - Brain Development and Sex Differences (3)

(3-0-3) Covers basic structural and functional differences between the female brain and the male brain. Major topics will include differences in architecture of the brain, brain neurochemistry, higher brain functions and disorders. Equates with NEUR 223 and GST 223.

Prerequisite: One of the following: PSY 154, NEUR 121, or PSY 121

PSY 276 - Directed Study (1-3)

(1 to 3 hrs.) Professional problem in psychology. Student to discuss with faculty mentor before consent can be granted. Conferences with instructor by arrangement.

PSY 281 - Psychological Research Methods (3)

(2-2-3) An introduction to psychological research methods including experimental design, data analysis and presentation, report writing and proposal development (APA style), and statistical software applications (SPSS). Laboratory experiences are an integral part of this course.

Prerequisite: PSY 154 and MATH 152/152E or higher

Corequisite: PSY 281L

PSY 282 - Psychological Statistics (3)

(2-2-3) Continuation of PSY 281 with special emphasis on the design and analysis of more complex experimental designs using inferential statistics and computer software applications, and original psychological experimentation by the student. Laboratory experiences are an integral part of this course.

Prerequisite: PSY 281

Corequisite: PSY 282L

PSY 300 - Human Factors in Design (3)

(2-2-3) PSY 300 is concerned with the interaction between people and the manufactured items they use. This course will highlight the limitations and capabilities of people and provide information on how these limitations and capabilities should be taken into account when designing manufactured items for people.

Prerequisite: PSY 154 or consent of instructor

PSY 321 - Aging Brain (3)

(3-0-3) Covers basic structural and functional changes due to aging. Major topics will include aging-related changes in architecture of the brain, brain neurochemistry, higher brain functions and disorders. Equates with NEUR 321.

Prerequisite: NEUR 121/PSY 121 or PSY 154 or consent of instructor

PSY 339 - Cooperative Education (1-8)

(1 to 8 hrs.) Participation in supervised work experience in a professional environment.

PSY 353 - Industrial/Organizational Psychology (3)

(3-0-3) Psychological principles applied in a work context. Topics include research methods involved in I/O psychology, the psychological principles involved in the development and use of tests for personnel selection and assessment, psychological theories of leadership, the application of motivational theories, training, worker stress and attitudes and the resulting job performance, job satisfaction, and engineering psychology.

PSY 354 - Introduction to Social Psychology (3)

(3-0-3) Scientific study of individual's relationship with social environment. Emphasis on attitudes, personality, prejudice, discrimination, dominance, role theory, social learning, social and interpersonal perception, and social movement.

Prerequisite: PSY 154

PSY 356 - Cognitive Development of the Infant and Child (3)

(3-0-3) Extensive examination of the cognitive and social cognitive development of the infant and child. Both the major theories of cognitive developmental psychology and the developmental processes of perception, memory, problem solving and other cognitive skills will be examined.

Prerequisite: PSY 154

PSY 358 - Psychological Testing (3)

(3-0-3) General introduction to psychological testing. Topics include interest inventories, measurement and evaluation of personality, measurement of proficiency, performance, attitudes, temperament, aptitude, capacity and intelligence through use of group assessment instruments used in psychological research, guidance, education, social research, business and industry.

Prerequisite: PSY 154

PSY 359 - Applied Behavior Analysis (3)

(2-2-3) Operant learning principles that govern human behavior applied to modification of behavior in clinical setting. Course is designed to give experience in dealing with behavioral problems in classroom and clinical settings. Laboratory experiences are an integral part of course.

Prerequisite: PSY 154

Corequisite: PSY 359L

PSY 360 - Sports Psychology (3)

(3-0-3) This course examines principles and applications of sports psychology, including how psychological factors affect sport and exercise performance.

Prerequisite: PSY 154

PSY 365 - Health Psychology (3)

(3-0-3) This course will provide an overview of the field of health psychology, examining how psychological theories and research are applied to enhance health and well-being and to prevent and treat illness. We will discuss the behavioral, emotional, social, and cognitive influences on physical health (and to a lesser extent, mental health). Among other topics, we will examine stress, coping, risk behavior, pain, chronic illness, and the use of health services.

Prerequisite: PSY 154

PSY 369 - Psychology of Human Sexuality: A Lifespan Perspective (3)

(3-0-3) This course examines contemporary knowledge and attitudes regarding human sexuality. Emphasis is placed on the critical analysis and synthesis of psychological research on sexuality in the context of current social and cultural influences throughout the lifespan. Students are encouraged to develop an appreciation for the complexity of sexuality in its conceptualization, representation and enactment.

Prerequisite: PSY 154

PSY 380 - Cognitive Psychology (3)

(3-0-3) Scientific study of mental processes such as perception, attention, memory, language and decision-making. Emphasis is on contemporary

issues such as types of memory, the relationship between the brain and cognition and computer models of information processing.

Prerequisite: PSY 154

PSY 384 - Sensation and Perception (3)

(2-2-3) Examination of the role of perception as an information extraction process. Includes constancies, space perception, illusions and influences of learning and experience on development of perception. Laboratory experiences are an integral part of this course.

Prerequisite: PSY 154

Corequisite: PSY 384L

PSY 389 - Honors Seminar in Psychology (3)

(3-0-3) Study and discussion of current topics, issues and problems in a particular area of the overall discipline. Topics will vary from semester to semester.

Prerequisite: HON 101 and HON 102

PSY 390 - Psychology of Personality (3)

(3-0-3) Introduction to major approaches, methods and findings in field of personality, including overview of basic theories, strategies, issues and conclusions; attention to assessment and personality change.

Prerequisite: PSY 154

PSY 393 - Psychology of Gender (3)

(3-0-3) This course is the scientific study of the biological, psychological, and environmental influences that affect sex and gender development. The course will explore the different theories and experiences of gender, along with issues surrounding gender in the United States. The course will examine the research on gender role development, and the biological, psychological, and environmental influences that may affect sex and gender similarities and differences in behavior, physical and mental health, work and achievement, relationships, communication styles, and sexuality. This course will also discuss the intersection of feminism and psychology, with critical thought and discussion to the nature and application of a feminist psychological approach.

Prerequisite: PSY 154 or GST 273

PSY 399 - Workshop (1-3)

(1 to 3 hrs.) Workshop for specifically designated task orientation in psychology. May be repeated in additional subject areas. Maximum of six semester hours may be earned under this course number.

Prerequisite: PSY 154

PSY 421 - Behavioral Neuroscience (3)

(3-0-3) Physiological mechanisms of normal human and animal behavior. Anatomy and physiology relevant to student of sensory and motor functions, emotion, motivation and learning. Equates with NEUR 421.

Prerequisite: PSY 154 and one of the following: NEUR/PSY 121 or NEUR/PSY 223 or NEUR/PSY 321 or permission of instructor

PSY 422 - Comparative Psychology (3)

(3-0-3) Theory and application of field and laboratory techniques used in understanding behavior of animals. Areas include: instinct, learning, motivation, sensory discrimination, heredity and perception.

Prerequisite: PSY 154

PSY 450 - Abnormal Psychology (3)

(3-0-3) Psychology, behavior and treatment of individuals with emotional, perceptual handicaps and behavioral disorders; general methods used in therapy and research in this area.

Prerequisite: PSY 154

PSY 452 - Disorders of Childhood (3)

(3-0-3) Survey of childhood disorders, therapies, research and practical issues involved in working with children, adolescents and families in a clinical setting.

Prerequisite: 1. PSY 154 and PSY 156 or 2. EDF 211

PSY 456 - Introduction to Clinical Psychology (3)

(3-0-3) Survey of basic theoretical issues and research in areas of assessments and psychotherapy. Consideration of ethical, legal and other professional problems in clinical psychology. Emphasis on clinical aspects of school psychologist's functions in working with school age children.

Prerequisite: PSY 154

PSY 465 - Drugs and Behavior (3)

(3-0-3) An introduction to the biological and psychological principles involved in the study of psychoactive drugs. Includes discussion of drug action, drug classification and theories of chemical dependency. Equates with NEUR 465.

Prerequisite: One of the following: PSY 154, NEUR 121, or PSY 121

PSY 469 - Counseling Psychology (3)

(3-0-3) A survey and study of the major approaches and orientations to therapeutic intervention in mental health services. Will include coverage of supportive/crisis intervention, insight/relationship oriented therapies, and group and family therapies. Students will receive exposure to theoretical literature and practical application of the various interventions.

Prerequisite: PSY 154

PSY 470 - Research Problems (1-3)

(1 to 3 hrs.) Independent research study of professional problem. Student to discuss with faculty mentor before consent can be granted. Conferences with instructor by arrangement.

PSY 471 - Addiction Therapies (3)

(3-0-3) An introduction to the treatment of psychoactive substance use disorders and psychoactive substance-induced organic mental disorders. Includes discussion of the phases, stages and progression of these disorders, treatment options and methods/process, maintenance procedures, and treatment outcome research findings.

Prerequisite: PSY 154

PSY 472 - Practicum (1-6)

(1 to 6 hrs.) Practical learning experiences in school, clinical or organizational settings under qualified supervision by a licensed/certified psychologist. Minimum of 160 hours over a minimum of eight weeks required for each three-hours of credit.

PSY 475 - Selected Topics (3)

(2-2-3) Student to discuss with faculty mentor before consent can be granted. Conferences with instructor by arrangement. Various methods courses in instrumentation and data reduction, innovation and research design, directed study of special problems in psychology, various application courses, and others. Student to discuss with faculty mentor before consent can be granted. Conferences with instructor by arrangement.

PSY 477 - Seminar in Developmental Research (3)

(3-0-3) Intensive examination of research in contemporary developmental psychology. Emphasis on reading and evaluating current journal articles and designing research projects.

Prerequisite: PSY 156

PSY 486 - Motivation (3)

(2-2-3) Consideration of basis of human and animal motivation in relation to other psychological processes.

Prerequisite: PSY 154

PSY 489 - Psychology of Learning (3)

(3-0-3) Fundamental principles of learning, including acquisition, retention, forgetting, problem solving and symbol formation; experimental studies; application of principles to practical problems in habit formation, development of skills, remembering and logical thinking.

Prerequisite: PSY 154

PSY 499C - Systems and Theories of Psychology (3)

(3-0-3) Intensive study of most influential historical systems of psychology including structuralism, functionalism, associationism, behaviorism, Gestalt psychology and psychoanalysis, and a treatment of contemporary developments.

RAPP - Regional Analysis and Public Policy

RAPP 101 - Introduction to Public Policy (3)

(3-0-3) This course introduces students to contemporary issues in public policy, including such areas as environmental policy, intergovernmental relations, education policy, justice policy and community and economic development. This course will introduce students to the basics of policy making at the local level; the political, social and economic history of U.S. regions, with the Appalachian region as a case study; the scientific knowledge and other expertise utilized in identifying community and regional problems, posing solutions, educating the public, and monitoring progress; the policy making process, from problem identification to policy solutions to evaluation.

RAPP 202 - Basic Computer Techniques in Regional Analysis (3)

(2-2-3) The course introduces students to computer-based research techniques that are widely used by practitioners in a variety of content areas. Course content includes earth and environmental sciences. Specific course activities address water quality, natural hazards, land use and natural resources from a regional perspective. Research techniques and tools are introduced that address planning a study, library investigations, collecting, processing and analyzing data, and dissemination results. Specifically, the basic skills of spread sheet and database use are introduced along with the essential and analytical skills of charting, statistics, and mapping. In addition, the course addresses internet communications, methods of transmitting and receiving data, data collection and compilation and/or a written communication results.

RAPP 203 - Society, Nature and Development (3)

(3-0-3) This course introduces the concepts, theories and practices used to understand communities and regions, which are commonly used in government, the private sector, nonprofit organizations and academia. Three major areas of community and regional analysis are encompassed by the course: society and culture, nature and the environment, and planning and development. Also incorporated is material on race, ethnicity, gender and class. An interdisciplinary approach is emphasized to provide students in environmental sciences, agriculture, economics, management, law, medicine, sociology, social work, geography and government with a foundation for understanding the social, political and environmental contexts of situations in which they work.

RAPP 289 - Regional Natural History (3)

(3-0-3) Characterization and identification of regional biota and the ecosystems they inhabit, including examinations of regional policies.

RAPP 300 - Seminar in Regional Issues I (3)

(3-0-3) This multidisciplinary seminar teams faculty, students, resource people and citizens in discussion, research, analysis and action plans related to specific topics and current issues in regional analysis and includes a practical focus on regional economic development and public policy. Selected topics include: housing, transportation, education, water quality, land use, air quality, wood, employment, health and health care, crime/violence, poverty and others.

RAPP 350 - Practicing Regional Analysis I (3)

(2-12-3) Practical experience in agency, organization, or field setting related to the student's academic program. Students will work in settings over the full semester or summer and complete a research paper, organizational analysis, position or policy paper that integrates the intellectual world with the real world.

RAPP 376 - Directed Research (3)

(3-0-3) Focused research under the direction of an IRAPP faculty member.

RAPP 450 - Practicing Regional Analysis II (3)

(2-12-3) Practical experience in agency, organization, or field setting related to students' academic program. Students will work in settings and conduct research or execute projects that will be further developed as part of the requirements in RAPP 490.

RAPP 490 - Seminar in Regional Issues II (3)

(3-0-3) This seminar will focus on selected current issues in regional analysis and will include a practical focus on their effect on regional economic development and regional policy. Persons from this region (citizens, policymakers and activists) will be invited to bring a firsthand view of these issues.

RCP - Respiratory Care Technology

RCP 110 - Cardiopulmonary Anatomy and Physiology (3)

(3 hrs.) The anatomy and physiology of the respiratory and the circulatory systems are explored in detail. Emphasis is placed on the interaction of systems in gas exchange and acid-base balance. The structure and function of the chest cage, mechanics of breathing and control of respiration are also included.

RCP 120 - Theory and Principles of Respiratory Care (4)

(4 hrs.) Principles and techniques of therapeutic procedures used in respiratory care are covered. Included are: the safe handling and administration of medical gases; use of humidity and aerosol therapy; providing lung inflation and bronchial hygiene therapy; and airway care. Presents indications, contraindications, and physiologic effect of each therapy with emphasis on safety and appropriateness of care.

RCP 125 - Cardiopulmonary Evaluation (4)

(4 hrs.) Cardiopulmonary assessment is addressed. Topics include invasive and non-invasive blood gas analysis and interpretation, pulmonary function studies, basic laboratory data interpretation, electrocardiography and assessment of neck and chest imaging.

RCP 130 - Pharmacology (3)

(3 hrs.) A detailed study of the pharmacological agents used in the practice of respiratory care. Common agents of the various drug classifications used in the treatment of patients with cardiovascular or pulmonary impairment are covered. Calculations commonly used in preparing and administering drugs are presented emphasizing the need for accuracy.

RCP 135 - Respiratory Pharmacology (1)

(1-0-1) Provides an overview of respiratory pharmacological agents and their use in the clinical practice of a respiratory therapist. Admission to RCP program required.

RCP 150 - Clinical Practice I (2)

(2 hrs.) Students will observe and assist with chest physical assessment, medical gas administration, humidity and aerosol therapy and bronchial hygiene in the assigned setting.

RCP 175 - Clinical Practice II (3)

(2 hrs.) Students will participate in the health care team while practicing techniques of respiratory care including airway management and bronchial hygiene in the assigned setting.

RCP 180 - Ventilatory Support (3)

(3 hrs.) The technological and physiological aspects of mechanical ventilation including the theory of operation, classification and management of the patient ventilatory system are offered.

RCP 190 - Advanced Ventilatory Support (2)

(2 hrs.) Advanced concepts in ventilatory support including monitoring and management of the patient ventilator system are addressed.

RCP 200 - Clinical Practice III (3)

(3 hrs.) Students will practice adult mechanical ventilation procedures and airway management in the critical care setting while continuing to perform other respiratory care skills.

RCP 204 - Emergency and Special Procedures I (3)

(3 hrs.) Prepares students to participate in advanced emergency life support and special procedures.

RCP 210 - Cardiopulmonary Pathophysiology (3)

(2 hrs.) The etiology, diagnosis, clinical manifestations and management of cardiopulmonary disorders as related to respiratory care are addressed.

RCP 212 - Neonatal/Pediatric Respiratory Care (3)

(3 hrs.) Special needs of neonatal and pediatric patients are addressed. Fetal cardiopulmonary development and changes at birth are covered. Equipment, procedures and methods used in the care and evaluation of neonatal and pediatric patients are also covered. Cardiopulmonary conditions and diseases particular to neonates are discussed.

RCP 214 - Emergency and Special Procedures II (3)

(3 hrs.) Prepares students to assist physician in advanced diagnostic and therapeutic procedures.

RCP 225 - Clinical Practice IV (3)

(3 hrs.) Students will observe and practice advanced cardiopulmonary evaluation techniques while improving efficiency in the ventilatory management of adult patients. Students may also practice pediatric and neonatal mechanical ventilation techniques in the assigned setting.

RCP 228 - Preventative and Long-Term Respiratory Care (2)

(2 hrs.) Discuss an overview of techniques for assessing client psychosocial and physical needs as well as strategies for client education in the prevention and management of cardiopulmonary diseases and disabilities.

RCP 250 - Clinical Practice V (3)

(3 hrs.) Emphasis is on preparing the student to participate in effective and efficient planning, managing and delivering respiratory care to diverse client population in various settings.

RCP 299 - Selected Topics in Respiratory Care (Clinic) (1-4)

(1 to 4 hrs.) A special project or experience in respiratory care will be selected to enhance core material in the Respiratory Care Program. It provides the student an opportunity for independent study and specialized instruction as approved by the instructor.

REAL - Real Estate

REAL 105 - Real Estate Principles (3)

(3-0-3) A general introduction to real estate as a business and profession. Acquaints the student with a wide range of subjects necessary to the practice of real estate, including license law, ethics, listing and purchase agreements, brokerage, deeds, financing, appraisals, mortgages and property management.

REAL 200 - Real and Personal Property Auctions (3)

(3-0-3) Introduction to the current theory and practice of the marketing of real estate and personal property through the auction process. State laws, regulations and ethical standards and practices which govern the profession will be covered in detail.

Prerequisite: REAL 105

REAL 303 - Real Estate Market Analysis (3)

(3-0-3) Designed to develop skills in analysis of real estate markets and to implement the results of this analysis in real estate sales and marketing management. Students should become proficient in the use of quantitative tools and interpretation of data output in real estate fields.

Prerequisite: REAL 320

REAL 309 - Real Estate Land Planning and Development (3)

(3-0-3) A comprehensive course on the specialized field of land planning and development, emphasizing the field of home construction. Neighborhood analysis, house design, mechanical systems and blueprint reading are stressed. Provides important background for developers, appraisers, brokers and property managers.

Prerequisite: REAL 105

REAL 310 - Real Estate Law (3)

(3-0-3) Overview of real estate law, focusing on legal fundamentals including contracts, concepts of title, title examination and licensing law.

Prerequisite: REAL 105

REAL 320 - Real Estate Marketing (3)

(3-0-3) Designed to help real estate professionals with listing, prospecting, showing, negotiating and closing. Furthermore, qualifying them, organizing and promotional package design will be discussed. Marketing skill development is emphasized.

Prerequisite: REAL 105

REAL 330 - Real Estate Property Management (3)

(3-0-3) Introduction to basic organization, administrative operation and management of residential and commercial projects of various sizes. The financial considerations, staffing, training and evaluation of personnel, sales methods, and promotional techniques in property management.

Prerequisite: REAL 105

REAL 331 - Real Estate Finance and Investment (3)

(3-0-3) Introduction to the mechanisms of real estate finance, sources of funds, principles of mortgage risk analysis, governmental agency roles, and cash flows. Theories and practices of real estate investments.

Prerequisite: REAL 105

REAL 339 - Cooperative Education (1-8)

(1 to 8 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a junior level status. Maximum of three hours of cooperative education credit (REAL 339/439) available for option credit.

REAL 399 - Special Class (1-4)

(1 to 4 hrs.) Workshops on various real estate topics will be presented periodically to supplement the basic course offerings in real estate. Credit toward degree programs must be approved by the student's advisor.

REAL 400 - Real Estate Brokerage (3)

(3-0-3) An examination of the establishment and operation of a real estate broker's office; concentrating on the unique problems of staff recruitment and training, sales activities, marketing practices and policies, budget

establishment, analysis and control, data handling, personnel policy, and professional ethics in such an agency.

Prerequisite: REAL 105

REAL 439 - Cooperative Education (1-8)

(1 to 8 hrs.) Work experience with an in-depth exposure representative of the student's academic level and experience analogous to a senior level course. Maximum of three hours of cooperative education credit (REAL 339/439) available for track credit.

REAL 476 - Special Problems in Real Estate (1-3)

(1 to 3 hrs.) Self-directed independent study on a specific problem, based on written proposal and justification submitted by student prior to registration. Each request will be considered on its own merit in relation to the special needs, interests and abilities of the student.

Prerequisite: Senior standing and consent of associate dean

REL - Religion

REL 221 - World Religions I (3)

(3-0-3) Origin, development, assumptions, values, beliefs, practices, great leaders and principal events of Judaism, Christianity, Islam and Zoroastrianism. Equates with IST 221.

REL 222 - World Religions II (3)

(3-0-3) Origin, development, assumptions, values, beliefs, practices, great leaders and principal events of Hinduism, Buddhism, Confucianism, Taoism, Jainism, Sikhism and Shintoism.

REL 321 - Early and Medieval Christian Thought (3)

(3-0-3) Ideas concerning the nature of God, Jesus, the church, man, sin, salvation, the good life and other issues presented by Jesus, Paul, John and the early and medieval church fathers or leaders to the beginning of the Reformation.

REL 322 - Modern Christian Thought (1500 to 1900) (3)

(3-0-3) Ideas concerning the nature of God, Jesus, the church, man, sin, salvation, the good life and other issues presented to theologians and religious leaders from the beginning of the Reformation to the 20th century.

REL 323 - Twentieth Century Christian Thought (3)

(3-0-3) Ideas concerning the nature of God, Jesus, the church, man, sin, salvation, the good life and other ideas presented by major 20th century theologians such as Barth, Bultmann, Tillich, Niebuhr, Wieman, Hartshorne, A.T. Robertson, Karl Rahner, Karl Adam, Thomas Altizer and Dietrich Bonhoeffer.

Prerequisite: REL 322 or PHIL 200

REL 399 - Special Topics in Religion (1-3)

(1 to 3 hrs.) These courses are specialized offerings in religious studies for the advanced undergraduate student. May be repeated for credit.

REL 476 - Special Problems (3)

(3-0-3) The student selects an approved topic in religion on which to do a directed study.

Prerequisite: 12 hours in REL

RSCI - Radiologic Sciences

RSCI 110 - Introduction to Radiological Sciences (1)

(1-0-1) This course is designated to introduce selected concepts and theories upon which the profession of radiologic sciences is based. This course is open to non-radiologic science majors and is a requirement for admission into the Radiologic Sciences Program. One hour of didactic experience per week.

RSCI 200 - Patient Care (3)

(2-2-3) The study of human needs of individuals in all states of life span. The focus is on basic patient care concepts, principles and skills, effective communication, legal and ethical issues, and related concepts such as growth and development, health and teaching/learning process. Two hours of didactic and two hours of laboratory experience per week.

Corequisite: RSCI 200L

RSCI 206 - Radiographic Anatomy, Positioning and Imaging Production I (6)

(5-2-6) An intensive study of radiographic anatomy, positioning, and image evaluation to prepare for clinical experience in an affiliated healthcare agency's radiology department. Emphasis is on the radiographer's role and function in the performance of such imaging procedures as chest, bony thorax, abdomen, upper and lower extremity and selected contrast procedures. Students are expected to demonstrate skills to safely and accurately perform a variety of imaging procedures under direct supervision. Five hours of didactic and two hours of laboratory experience per week.

Prerequisite: Successful completion of the pre-radiologic science curriculum and official admission to the Radiologic Science Program

Corequisite: RSCI 206L

RSCI 210 - Radiographic Equipment and Imaging I (3)

(2-2-3) Restriction: admission to associate degree radiologic science program. The introductory study of radiographic equipment and imaging, with emphasis on the role and function of the radiographer in image formation, radiation protection and safety. Two hours of didactic and two hours of laboratory experience per week.

Corequisite: RSCI 210L

RSCI 230 - Radiography Clinical Internship I (10)

(0-40-10) Clinical experience in an affiliated healthcare agency's radiology department, designated to introduce the student to the radiographer's role and function in the practice of radiography. The student will be applying concepts and skills learned in previous RSCI courses. Emphasis is on performance of imaging procedures such as chest, bony thorax, abdomen, upper and lower extremity and selected contrast procedures. Forty hours per week in a healthcare agency's radiology department.

Prerequisite: RSCI 200, RSCI 206 and RSCI 210

RSCI 300 - Film Critique and Evaluation (2)

(2-0-2) Radiographic film evaluation in patient positioning, anatomy and radiographic quality factors with an emphasis on methods to correct and improve images. Two hours of didactic instruction per week.

Prerequisite: RSCI 310

RSCI 310 - Radiographic Anatomy, Positioning and Image Production II (4)

(3-2-4) A continuation of RSCI 206 which studies radiographic anatomy, positioning and image evaluation with emphasis on the radiographer's role and function in the performance of imaging procedures such as vertebral column, hip and pelvis, cranium, facial bones and paranasal sinuses. Three hours of didactic and two hours of laboratory experiences per week.

Prerequisite: RSCI 230 and RSCI 330

Corequisite: RSCI 310L

RSCI 320 - Radiography Clinical Internship II (10)

(0-40-10) Clinical experience in an affiliated healthcare agency's radiology department, designed to continue to build on clinical experience obtained in preceding RSCI courses. Emphasis is on performance of imaging

procedures such as vertebral column, hip and pelvis, cranium, facial bones, and paranasal sinuses. Forty hours per week in a healthcare agency's radiology department.

Prerequisite: RSCI 310

RSCI 330 - Imaging Pathology (2)

(2-0-2) A study of pathological imaging to include the cardiovascular, genitourinary, digestive and accessory organs, respiratory, nervous and musculoskeletal systems. This course will investigate the etiology, signs and systems and the primary methods of diagnosis. A major emphasis is placed on radiologic visualization of pathological conditions. Two hours of didactic experience per week.

Prerequisite: RSCI 200, RSCI 206 and RSCI 210

RSCI 335 - Radiation Biology and Protection (2)

(2-0-2) A study of the effects of radiation on the cells, tissues, organs, and the entire human body at all stages of life span. The emphasis is on radiation protection procedures and methods of monitoring radiation exposure. The role and function of the radiologic science technologist is discussed regarding the legal responsibility for radiation protection of the patients, other health care personnel, and the public. Admission to the Radiologic Science program is required.

Prerequisite: RSCI 200, RSCI 206, RSCI 210, RSCI 230, RSCI 310, RSCI 320, and RSCI 330

Corequisite: RSCI 340, RSCI 346, and RSCI 350

RSCI 340 - Radiographic Equipment and Imaging II (3)

(2-2-3) An advanced study of radiographic film processing and image formation with an emphasis on the role and function of the radiographer in such areas as quality assurance, fluoroscopic imaging, digital imaging and tomography. Admission to the Radiologic Science Program is required.

Prerequisite: RSCI 200, RSCI 206, RSCI 210, RSCI 230, RSCI 310, RSCI 320, and RSCI 330

Corequisite: RSCI 340L, RSCI 335, RSCI 346, and RSCI 350

RSCI 346 - Radiation Physics and Electronics (2)

(2-0-2) The study of radiation physics and electronics with emphasis on concepts and principles as related to the role and function of the radiographer. Admission to the Radiologic Science Program is required.

Prerequisite: RSCI 200, RSCI 206, RSCI 210, RSCI 230, RSCI 310, RSCI 320, and RSCI 330

Corequisite: RSCI 335, RSCI 340, and RSCI 350

RSCI 350 - Seminar in Radiography (2)

(2-0-2) A course designed to assess the student's knowledge and application of the radiography practice. Based on assessment results, the faculty will facilitate review and learning experiences to assist the student in meeting identified learning needs. Admission to the Radiologic Science Program is required.

Prerequisite: RSCI 200, RSCI 206, RSCI 210, RSCI 230, RSCI 310, RSCI 320, and RSCI 330

Corequisite: RSCI 335, RSCI 340, and RSCI 346

RUS - Russian

RUS 101 - Beginning Russian I (3)

(3-0-3) An introduction to Russian grammar beginning with the learning of the Cyrillic alphabet and progressing through a brief introduction of conjugation of verb forms and declension of adjectives and nouns.

RUS 102 - Beginning Russian II (3)

(3-0-3) A continuation of RUS 101. An analysis of Russian grammar with emphasis on writing and speaking.

Prerequisite: RUS 101

RUS 201 - Intermediate Russian I (3)

(3-0-3) A continuation of Russian grammar with emphasis on vocabulary building and language structure. Russian lecture and elementary translation exercises are introduced in this course.

Prerequisite: RUS 102

RUS 202 - Intermediate Russian II (3)

(3-0-3) A continuation of RUS 201 with additional emphasis on Russian literature, translation, conversation and writing.

Prerequisite: RUS 201

RUS 301 - Readings in Russian Literature (3)

(3-0-3) Directed study in Russian literature. The short story, poetry, prose and essays. Review of Russian grammar as necessary. Oral practice.

Prerequisite: RUS 202

RUS 302 - Advanced Readings in Russian Literature (3)

(3-0-3) Readings in Russian from Lermontov, Turgenev, Tolstoy, Gogol, Dostoyevski and others. Assigned readings on Russian culture and history. Review of Russian grammar as necessary.

Prerequisite: RUS 301

SCI - Science

SCI 104 - Modern Issues and Problems in the Physical Sciences (3)

(3-0-3) This course offers an interdisciplinary approach to study of the physical sciences. It emphasizes decision-making based on the interpretation of data and scientific arguments. The course incorporates the study of scientific principles and concepts needed to understand current issues and problems related to modern science. This course satisfies the NSC II requirement for general education.

SCI 111 - Inquiry Physical Science for Teachers (3)

(1-4-3) Preservice elementary and middle grades teachers will learn the essential science concepts established by the Kentucky core content for science, which includes topics in areas of properties of matter, force and motion, heat, light and optics, electricity and magnetism, and sound. Students will learn these science concepts through a process of direct observation of physical phenomena, making sense of those observations through inference and reason and in collaboration with fellow students and instructors. Not acceptable for majors or minors in the physical sciences.

Corequisite: SCI 111L

SCI 123 - Concepts and Experiences in Energy (3)

(3-0-3) An interdisciplinary approach to the study of energy. Incorporates experiences and concepts from motion, heat, light, magnetism, electricity, radioactivity and sound waves. Equates with ETM 123, PHYS 123 and SSE 123. This course satisfies the Level 2 Knowledge NSC requirement for general education.

SCI 199 - Special Class (1-6)

(1 to 6 hrs.)

SCI 299 - Special Class (1-6)

(1 to 6 hrs.)

SCI 391 - Teaching Science in the Middle Grades (3)

(2-2-3) Students are introduced to learning theories using the lens of teaching middle school science. Lesson development, backwards design, biological safety, laboratory design, the role of science in society, national standards for instruction of science, curriculum design using national standards, using large scale data sets, and science education research are

the major foci of this course. Fifteen hours of level III field experience in a science classroom are required.

Prerequisite: BIOL 110, SCI 111 and ESS 112

Corequisite: SCI 391L

SCI 402 - Integrated Biology, Mathematics and Physical Science Teaching Methods (3)

(2-2-3) Methods course for students who desire to become teachers of middle school science and secondary school biology, physical science or mathematics. The course provides integrated and content specific clinical experiences designed to prepare students for student teaching their subsequent roles as classroom teachers.

Prerequisite: 20 hours from ASTR, CHEM, ESS, PHYS, SCI

Corequisite: SCI 403

SCI 403 - Integrated Biology, Mathematics and Science Field Experiences in Teaching (3)

(1-4-3) Course provides structured field experiences for students who desire to become teachers of secondary school biology, mathematics or physical science. This course provides guided field experiences to acclimate the student into the culture of teaching.

Prerequisite: 20 hours from ASTR, CHEM, ESS, PHYS, SCI

Corequisite: SCI 402

SCI 476 - Special Problems (1-6)

(1 to 6 hrs.) Topic to be approved prior to registration. Credit available in the sciences and mathematics.

SCI 490 - Science for the Elementary Teacher (3)

(2-2-3) This course focuses on the development of competencies in materials and methods for teaching science to elementary children. Emphasis is placed on writing curriculum, learning the elementary science theory base, questioning strategies, best practices, science process skills, cooperative learning, technology and assessment. Fifteen hours of field experiences are an integral part of this course.

Prerequisite: Take BIOL 110, SCI 111, ESS 112, and MATH 232

Corequisite: SCI 490L

SCI 491 - Science for the Middle School Teacher (3)

(2-2-3) A study of pedagogy, science content and techniques applicable to the teaching of science to middle school or junior high children.

Corequisite: SCI 491L

SE - Systems Engineering

SE 170 - Introduction to Systems Engineering (3)

(2-2-3) This course offers an introduction to multidisciplinary knowledge that is necessary to integrate and develop automated systems, which involve technologies from various engineering fields. It includes the operation of the mechanical, electrical, electronic and computational components of industrial processes.

Prerequisite: MATH 175

Corequisite: EEC 141 (Previous or Concurrent) and SE 170L

SE 330 - Engineering Systems Design (3)

(3-0-3) This course covers fundamentals of engineering systems design. The key principles, elements and precepts of modern design are discussed with emphasis on the design methodology in both individual and collaborative settings. Topics include the relationship between system specifications and system design, failure mode and effects analysis (FMEA), system development models, customer integration into the design process, design disciplines and practices, and manufacturing plan.

Prerequisite: SE 170, MATH 275, EMM 203, and EMM 286

SE 415 - Control Systems Engineering (3)

(2-2-3) This course covers concepts related to control theory such as analyzing, modeling, designing and evaluating continuous control systems in closed loop for analog processes that satisfy the desired performance according to specifications in applications of regulatory control of processes and systems.

Prerequisite: MATH 363 and EEC 345

Corequisite: SE 415L

SE 443 - Sensors and Actuators (3)

(2-2-3) This course covers the fundamentals, characteristics and applications of sensors, actuators and conditioning circuits, which allow monitoring and control of complex and/or high frequency systems used in the design and integration of mechatronic systems.

Prerequisite: MATH 363 and EEC 345

Corequisite: SE 443L

SE 488 - Automation Systems (3)

(2-2-3) This course offers necessary tools to automate the operation of processes and machinery without human interaction through the use of NI data acquisition hardware (DAQ) and LabVIEW software for PC-based control and automation. Applications range from simple actuator activation/deactivation control, advanced closed-loop control with multiple inputs and outputs, to SCADA systems design using industrial communication protocols.

Prerequisite: One of the following: 1. EMM 270, SE 443, EEC 346 and SE 415 or 2. EMM 386

Corequisite: SE 488L

SOC - Sociology

SOC 101 - Introduction to Sociology (3)

(3-0-3) This course offers a general overview of basic perspectives and methods in the discipline examining groups, formal organizations and institutions, while focusing on inequalities of class, gender and race, crime, deviance and social change. This course satisfies the Level 2 Knowledge SBS requirement for general education.

SOC 203 - American Social Problems (3)

(3-0-3) This course introduces students to the basic principles, concepts, and theories of social problems such as poverty, racism, drug use, sexism, and crime with an emphasis on the societal conditions that contribute to the social problems. This course satisfies the Level 3 Ethics and Civic Engagement SBS requirement for general education.

SOC 210 - Sociology of Deviance (3)

(3-0-3) This course is designed to introduce the student to the sociological perspective with respect to the definition, courses and social consequences of deviance. Equates with CRIM 210.

Prerequisite: SOC 101

SOC 273 - Introduction to Women's Studies (3)

(3-0-3) A survey course designed to develop students' awareness of women's literature, poetry, contributions to science and history, as well as an introduction to feminist theory. Women scholars of all nations and races will be highlighted.

SOC 300 - Class, Power, and Privilege (3)

(3-0-3) This course explores the nature of social inequality with an in-depth focus on the dimension of social class. Students will examine theories of privilege, oppression and the intersectional nature of inequality. Equates with GST 300.

Prerequisite: SOC 101

SOC 302 - Population Dynamics (3)

(3-0-3) An introduction to population issues and the field of social demography. Emphasizes the social, economic, and political influences influencing the U.S. demographic structure. The dynamics of population growth, structure and its societal effects are also discussed.

SOC 304 - Social Change (3)

(3-0-3) This course examines change theories from early to contemporary scholars. Areas of analysis include the antecedents and effects of change, their function, structure, and ramifications. Unintentional social evolution versus intentional collective action and social revolution are also explored.

Prerequisite: Three hours of sociology general education (SOC 101 or SOC 203)

SOC 305 - Cultural Anthropology (3)

(3-0-3) Students study literate and nonliterate cultures using the ethnographic approach. Universal aspects of human experience, including the family, economic, political and religious systems examined in cross-cultural perspective are explained. Equates with IST 305 and GST 305.

Prerequisite: SOC 101

SOC 306 - Juvenile Delinquency (3)

(3-0-3) This course examines the extent, ecological distribution and theories of delinquency in contemporary American society, including a critical examination of trends and methods of treatment of delinquency. Equates with CRIM 306 and SWK 306.

Prerequisite: SOC 101

SOC 312 - Sociology of Sports (3)

(3-0-3) Students explore the world of sports and athletic competition as an expression of mainstream American values and as its own subculture. Course topics also include social status and inequality in sports, codes of honor and ethics, and criminality in the sports world.

SOC 315 - Sociology of White Collar Crime (3)

(3-0-3) This course provides students with a variety of theoretical explanations and examples of corporate and organizational crime, as well as crime committed by individuals in the workplace. Equates with CRIM 315.

SOC 316 - Global Crime and Terrorism (3)

(3-0-3) Students are introduced to international crime and terrorism in the 19th, 20th and 21st centuries through the study of government-organized Armenian Genocide, the Holocaust and the Nuremberg Tribunal, and the initiation of human rights laws following the end of World War II. Students are introduced to the study and structure of international terrorism that has emanated from the Neo-Salafi and Wahhabi ideology of Radical Muslims beginning in the 20th century after the state of Israel was formed. Other types of organized crime that are discussed will include: corruption, drug trafficking, weapons trafficking and human trafficking. The new International Criminal Court is introduced to students as well as international civil cases involving human rights violations. Equates with CRIM 316.

SOC 317 - Police Culture (3)

(3-0-3) This course provides detailed information to students about the paramilitary structure of the law enforcement agencies. Students learn about the history of policing, the code of silence, police brutality, corruption and the history of police commissions. Students gain an understanding of the bureaucratic, organizational and political pressures that exist within and outside these organizations. Students develop a better understanding of the Bill of Rights and how that affects police work, as well as Supreme Court cases and decisions that have impacted law enforcement practices. Equates with CRIM 317.

SOC 319 - Responding to Military and Veteran Populations (3)

(3-0-3) The purpose of this course is to understand military culture, the stressors associated with military lifestyle and the cycles of deployment that service members and their families navigate. Different military contexts (e.g. active duty, guard/reserve, veteran) are explored. Ethical issues for working in this environment are considered. Theory-based and research-informed strategies to intervene with combat related trauma, co-morbid disorders, traumatic brain injuries, and psychosocial issues with families are reviewed. Military related policies are also examined, as well as veteran systems of care. Students completing this course will have a more in-depth understanding of and ability to work with the military, veterans, and their families in a variety of settings. Equates with CRIM 319 and SWK 319.

SOC 323 - Urban Sociology (3)

(3-0-3) This course focuses on the rise of modern cities; theoretical explanations of urbanization; and the analysis of modern urban problems.

SOC 325 - Global Inequality (3)

(3-0-3) An introduction to globalization and global inequality. Students examine the manifestation of and systematic causes of global inequality in the areas of education, wealth, information, technology, health, human rights, and other areas. Solutions for alleviating global inequality are explored. Equates with CRIM 325.

Prerequisite: SOC 101

SOC 330 - Health Structures and Behavior (3)

(3-0-3) This course examines the social, cultural and psychological factors that influence health and health behaviors. Occupational and structural contexts associated with health and healthcare are explored, including an overview of healthcare delivery policies and the roles of various health professionals. Equates with SWK 330.

SOC 333 - Women and Partner Violence (3)

(3-0-3) This course offers social science and experiential exposure to theories, policies, professionals and skills associated with women's experiences with intimate partner violence. The unique challenges of women in rural settings, women of color, and women in same-sex relationships are also explored. Equates with CRIM 333, SWK 334 and GST 333.

SOC 335 - Families in Modern Society (3)

(3-0-3) Examines 21st century marriage and families as diverse social institutions. Social and behavioral theories are used to analyze how economics, education, race/ethnicity, gender, sexual norms and other social institutions impact the family's role, composition, organization, and interpersonal relationships within. Equates with SWK 335 and GST 335.

SOC 337 - Sociology of Food (3)

(3-0-3) A sociological analysis of the politics, economy and culture of food. Topics include food consumption patterns, body image, health, and eating disorders; food and individual, community and cultural identity; class, ethnic, and gender-based food patterns; modern food production patterns, inequality and the environment; social food movements and social justice. Equates with CRIM 337, GST 337, and SWK 337.

SOC 343 - Religion and Sexuality (3)

(3-0-3) This course explores the intersection between sexuality and religion in contemporary societies. Broad topics this course covers include an analysis of fundamentalist thought, metaphysics, and sociology of religion through the lens of sexual behavior and sexual orientation. Equates with CRIM/GST/SWK 343.

Prerequisite: 3 hours from SOC, CRIM, SWK, GST or consent of instructor

SOC 347 - Sociology of Happiness (3)

(3-0-3) Drawing on social science literature, this course uses the sociological imagination to analyze the relationship between macro level social forces and personal well-being. Equates with SWK 347.

Prerequisite: SOC 101

SOC 350 - Sex and Gender (3)

(3-0-3) This course examines gender and sexuality with a critical, feminist perspective. In readings and discussions, students will explore how sexism impacts our society and intersects with other systems of oppression, such as racism, class inequality and homophobia. Equates with GST 350.

Prerequisite: SOC 101 or GST 273

SOC 354 - Individual and Society (3)

(3-0-3) This course explains patterns of individual thoughts, behaviors, and their relationship to mid-and micro-level social structures. Topics include the institution's role in the social self, personality formation/change, aggression, and conformity. The influence of small group processes on individual behavior and identity formation also is discussed. Equates with GST 354.

SOC 355 - Sociology of the Body (3)

(3-0-3) An introduction to the sociological study of the body. Students explore the multifaceted interplay between culture, groups, identity, the Self, and the body. The social and cultural construction of bodies related to inequality based on race, class, gender, sexuality, disability and other dimensions are examined. Equated with GST 355, SWK 355 and CRIM 355.

SOC 363 - Sex Industry Perspectives (3)

(3-0-3) This course explores current theoretical debates and empirical studies on the sex industry. Topically, this course covers the feminist sex wars, stripping, prostitution, pornography and sexual trafficking. Equates with CRIM 363 and GST 363.

SOC 370 - Rural Sociology (3)

(3-0-3) This course features the sociological study of rural people and rural places, specifically rural families and communities, the rural workforce and globalization, ethnic diversity, institutional change and natural resource issues.

SOC 372 - Victimology (3)

(3-0-3) This course provides an examination of criminal victimization in the United States via an overview of current theory, research, and trends within the context of specific victimization types. This course will cover three general inter-related areas: research and theory on victimization, the consequences of victimization, and the practical responses to victimization. Equates with CRIM 372.

Prerequisite: CRIM 250

SOC 374 - Race and Ethnicity (3)

(3-0-3) This course adopts a critical perspective to analyze minority relations in American society. This course examines theories of prejudice and discrimination, processes of inter-group relations, the status and experiences of various minority groups, and strategies for social change. Equates with GST 374.

Prerequisite: SOC 101

SOC 376 - Sociology of Work (3)

(3-0-3) This course examines trends in work and technology in industrial and post-industrial society within organizations and among occupational groups focusing on labor management relations; class, gender and race at work and inequalities in the global economy.

SOC 380 - Race, Class, Gender and Crime (3)

(3-0-3)

This course focuses on the intersection of race, class and gender membership with regard to treatment within the criminal justice system by police, judges, juries and actual sentencing decisions including the death penalty. The course also provides insights about the unique types of crime most likely to be perpetrated by specific demographic groups. Students are also exposed to criminological theories that explain criminal justice system disparity, discrimination, and differences in actual offending patterns. Equates with CRIM 380, GST 380 and SWK 381.

SOC 388 - Sociology of Punishment (3)

(3-0-3) This course provides the student with a background knowledge of the development of ideas and actions taken against those people who have been the objects of society's punishment. Equates with CRIM 388.

Prerequisite: SOC 210

SOC 399 - Special Class (1-3)

(1 to 3 hrs.) Unique topics and learning experiences that supplement regular course offering. May be repeated in additional subject areas.

SOC 401 - Criminology (3)

(3-0-3) This course provides a thorough examination of criminological theories. Students are provided with explanations of the causes of crime, as well as the methods of effective treatment and prevention of crime. Equates with CRIM 401.

Prerequisite: SOC 210

SOC 404 - Crime and Justice Policies (3)

(3-0-3) Students will learn how criminal justice policies are determined by crime incidents, lobbyists, and social movements. Students also will learn how policy writers and politicians develop policies and the intended and unintended effects of such policies. Equates with CRIM 404.

Prerequisite: CRIM 250 and CRIM 380

SOC 405 - Sociological Theory (3)

(3-0-3) This course reviews major classical theorists (Durkheim, Marx, Weber, Mead, and Simmel) and their contributions to sociology as a discipline and the resulting theoretical perspectives including functionalism, conflict theory, critical theory and symbolic interactionism.

Prerequisite: Three hours from sociology general education (SOC 101 or SOC 203)

SOC 416 - Family Dynamics (3)

(3-0-3) This course provides an intensive analysis of the family in its social context. Emphasis is placed upon social interaction within the family, socioeconomic and sociocultural factors which bear influence upon it, and the relationship of the family to the total social system.

SOC 426 - Communities (3)

(3-0-3) This course explores the structure, character and function of community in a rapidly changing world and provides students with a basic understanding of community social structures and how they function to create community in rural and urban settings. Students will learn how community theory is related to building solidarity and to creating effective community and economic development programs.

SOC 439 - Cooperative Education (1-8)

(1 to 8 hrs.) This course requires participation in supervised work experience in a professional environment.

SOC 441 - Issues in Aging (3)

(3-0-3) This course introduces students to the field of gerontology and the broad spectrum of issues involved in the study of aging. Social, physical, psychological, and cognitive aspects of aging are examined, and implications for social services and policy are discussed. Equates with SWK 441.

SOC 445 - Death and Dying (3)

(3-0-3) Situates an analysis of death and dying within social processes and social problems. This course includes a practical set of strategies for working with dying persons, their families and grief. Equates with SWK 445.

SOC 450 - Sociological Research (3)

(3-0-3) Introduces the basic techniques of research design and analysis in the social sciences.

Prerequisite: Three hours of sociology or consent of instructor

SOC 451 - Quantitative Data Analysis (3)

(3-0-3) This course covers survey-based data preparation, computer assisted analysis and report writing for the social sciences. Equates with SWK 451.

Prerequisite: SOC 450

SOC 455 - Qualitative Research Methods (3)

(3-0-3) This course introduces the perspectives and methods of the qualitative approach and ethical issues. The course examines basic methodologies of ethnography, case studies, participatory action research and archival research and specific techniques for doing in-depth interviewing, participant observation, observation, and content analysis.

SOC 456 - Organizations in Contemporary Society (3)

(3-0-3) A sociological study of the roles of formal organizations in society, including consideration of their structures and processes. This course will examine contemporary issues in the sociology of organizations and work, including bureaucratic and alternative structures and the role of leadership and decision making. Equates with CRIM 456.

SOC 459 - Social Change in Appalachia (3)

(3-0-3) This course reviews the industrial and post-industrial periods of economic, political and social change in the Appalachian region, institutional policies and programs and grassroots solutions to social problems.

SOC 461 - Sociology of the Law (3)

(3-0-3) This course provides a clear understanding of the manner in which laws are formed to protect certain groups and marginalize others who are often perceived as threatening. Deconstruct specific laws by analyzing the formation of criminal law from its incipient stages of development in American society. Equates with CRIM 461.

SOC 465 - Environmental Sociology (3)

(3-0-3) This course introduces students to the subfield of sociology examining current environmental issues and conflicts and various theoretical perspectives used to understand them and formulate solutions. The role of grassroots organizations is also reviewed. Equates with CRIM 465.

SOC 469 - Animals and Society (3)

(3-0-3) An examination of the interactions and emergent relationships between humans and animals from a sociological perspective. Equates with CRIM 469 and SWK 469.

SOC 476 - Special Problems (1-3)

(1 to 3 hrs.) Students arrange with the department to study some particular aspect of the field of sociology.

SOC 499C - Senior Seminar (3)

(3-0-3) Capstone course synthesizes sociological themes and theories, examines contemporary cultural issues, and explores career possibilities.

SPA - Spanish

SPA 101 - Spanish Language and Culture I (3)

(3-0-3) Communicating in Spanish through the basic skills of listening, speaking, reading and writing. The course also includes the appreciation and understanding of the Spanish and Latin American culture. This course satisfies the Level 3 Global Cultures HUM requirement for general education.

SPA 102 - Spanish Language and Culture II (3)

(3-0-3) Continued study of listening, speaking, reading and writing basic Spanish with emphasis on the appreciation of the culture of Latin America and other Hispanic cultures.

Prerequisite: SPA 101

SPA 201 - Intermediate Spanish I (3)

(3-0-3) Reading of moderately difficult Spanish texts; thorough review of minimum essentials of Spanish grammar; conversational practice.

Prerequisite: SPA 102

SPA 202 - Intermediate Spanish II (3)

(3-0-3) A continuation of SPA 201. Reading of more difficult texts.

Prerequisite: SPA 201

SPA 300 - Grammar and Composition (3)

(3-0-3) Review of difficult concepts of Spanish grammar. Study and analysis of writing styles. Emphasis on written composition.

Prerequisite: SPA 202

SPA 304 - Spanish Culture and Civilization (3)

(3-0-3) Study of the architecture, history, literature, music, customs, current events and ways of life in Spain. Equates with IST 340.

Prerequisite: SPA 202

SPA 305 - Conversation (3)

(3-0-3) Conversation on daily subjects of current interest pertaining to the Hispanic world; acquisition of new vocabulary through reading of current material and usage in oral work.

Prerequisite: SPA 202

SPA 306 - Latin American Culture and Civilization (3)

(3-0-3) Study of the architecture, art, geography, history, literature, music, customs, current events, and ways of life on the Latin American world. Equates with IST 341.

Prerequisite: SPA 202

SPA 309 - Explorations in Hispanic Cinema Analysis (3)

(3-0-3) Viewing, exploration and analysis of Hispanic films. Study of film trends and issues. Viewer's guide to film discussion and review. May be taken more than once for credit.

Prerequisite: SPA 202

SPA 315 - Introduction to Hispanic Literature (3)

(3-0-3) An introduction to the study of literature.

Prerequisite: SPA 202

SPA 330 - Hispanics in the United States (3)

(3-0-3) Analyze the historical, cultural and societal mechanisms that contribute to the creation of a new cultural identity, that of the Chicano, Mexican-American and/or Hispanic American.

Prerequisite: SPA 202

SPA 340 - Hispanic Popular Culture (3)

(3-0-3) This course will focus on the theory and practice of Hispanic popular culture.

Prerequisite: SPA 202

SPA 399 - Special Class (3)

(3-0-3) These courses are usually specialized offerings in Spanish for undergraduate students. The purpose of these courses is to enhance the existing Spanish program.

SPA 404 - Advanced Spanish Grammar (3)

(3-0-3) Grammatical analyses of the structure of Spanish and practice with a wide range of exercises.

SPA 432 - Contemporary Spanish and Spanish American Literature (3)

(3-0-3) A survey of significant characteristics of 20th century Hispanic literature, including the novel, the short story, the drama, the essay and poetry.

Prerequisite: SPA 300

SPA 440 - Seminar in Hispanic Literature (3)

(3-0-3) Group instruction and practice in research methods peculiar to Hispanic literature.

Prerequisite: SPA 300

SPA 476 - Directed Study (1-3)

(1 to 3 hrs.) This course is a directed study for the undergraduate Spanish major. Each request for the course will be considered on its own merits in relation to the special needs of the student.

SPA 499C - Senior Seminar (3)

(3-0-3) An integrative capstone course in Spanish. A review of key components of Spanish grammar, culture, literature and of issues related to proficiency in Spanish (speaking, listening, reading and writing) and to career opportunities for Spanish majors.

Prerequisite: 15 hours in upper-division SPA

SPMT - Sport Management

SPMT 100 - Introduction to Sport Management (3)

(3-0-3) The course is designed to assist students in understanding the aims, objectives, principles, policies, procedures and requirements for a successful career as a sport administrator.

SPMT 102 - Diversity in Sport and Physical Activity (3)

(3-0-3) This course has been developed to assist students in understanding the historical, philosophical, theoretical and practical exploration and analysis of diversity and multicultural issues present in American society, and how they relate to sport and physical activity. Emphasis is placed on persons with exceptionality, ethnicity, culture, gender, youth at risk, sexual orientation and aging.

SPMT 200 - Management of Sport and Physical Activity Programs (3)

(3-0-3) This course has been developed to assist students in understanding the management principles and procedures applicable to sport and physical activity programs. Emphasis will be on management of personnel, facilities, finances and the related legal issues applying to sport and physical activity.

Prerequisite: SPMT 100

SPMT 204 - Sport Finance (3)

(3-0-3) This course has been developed to assist students in understanding the basic concepts, theories and organization of financial management as applied to sport.

SPMT 206 - Ethics in Sport and Physical Activity (3)

(3-0-3) The study of moral issues related to sport in intrinsic and extrinsic dimensions, and the development of a personal philosophy regarding sport responsibility in a sport management setting.

SPMT 304 - Sport Economics (3)

(3-0-3) The study of how economic theory applies to amateur and professional sport. Topics include the cost and market structures of professional sport, the economics of stadiums and arenas, and the economic impact of sport teams on a local economy.

Prerequisite: SPMT 204

SPMT 307 - Sport Marketing (3)

(3-0-3) The course is designed to assist students in understanding the aims, objectives, principles, policies, procedures and requirements for a successful career in sport marketing.

SPMT 309 - Risk Management in Sport and Physical Activity (3)

(3-0-3) This course has been developed to assist students in understanding the complexities of risk management, a distinct companion to sport law. Students will be exposed to policies, procedures, safety audits, risk reviews and emergency action plans to combat the flood of lawsuits that confront the physical activity, recreation and sport industries.

SPMT 310 - Governance in Sport (3)

(3-0-3) The course is designed to assist students in understanding the aims, objectives, principles, policies, procedures and requirements for successful careers as sport administrators.

SPMT 380 - Media Relations in Sport and Physical Activity (3)

(3-0-3) This course has been developed to introduce the student to the components necessary to manage a successful sport media relations program as well as perform all the functions of a sport information director. The preparation of materials for distribution to media outlets, such as media guides, game programs and special event publications as well as the organization of statistical information for publications will be discussed. The management of press conferences, press boxes and sport personnel interviews and the impact of technology on these events will also be covered.

SPMT 402 - Planning, Designing, and Managing Sport and Physical Activity Facilities (3)

(3-0-3) The course is designed to assist students in understanding the aims, objectives, principles, policies, procedures and requirements for successful facility/event management.

SPMT 430 - Sport in a Global Society (3)

(3-0-3) This course is designed to allow the student to study the role of sport as a global industry and its political, financial and cultural impact on individuals, groups and society. Emphasis of the course focuses upon the various issues that sport administrators may face on a daily basis including but not limited to substance use and abuse, academic dishonesty, discrimination, finance, commercialization and violence.

SPMT 450 - Field Experience Preparation (3)

(2-0-2) This course is designed to prepare the student for the field experience component of the program.

SPMT 471 - Sport Management Internship (12)

(12-0-12) This course will provide students with practical experiences in sport administration that might include high school, collegiate, or professional settings, as well as not-for-profit agencies or the private sector. This course requires 540 approved internship contact hours for completion.

Prerequisite: SPMT 450, senior standing, and GPA of 2.0 or better

SPMT 476 - Special Problems in Sport Management (1-3)

(1 to 3 hrs.) This course is a self-directed, independent study on a specific problem based on written proposal and justification submitted by the student prior to registration. Each request will be considered on its own merit in relation to the special needs, interest and abilities of the student.

SPMT 480 - Legal Aspects of Sport Physical Activity (3)

(3-0-3) The study of legal terms and concepts and their applications to sport and physical activity. Topics to be covered include negligence, risk management, intentional torts, contract law, constitutional law, and sport and legislation.

Prerequisite: SPMT 309

SPMT 481 - Employee Service Management in Sport and Physical Activity Settings (3)

(3-0-3) The study of employee services in sport and physical activity settings which provides practical solutions to work/life issues enabling the organization or agency to recruit and retain a quality workforce. Programming opportunities that will be identified will assist in improving relations between employees and management, increase overall productivity, boost morale, and reduce absenteeism and turnover in sport and physical activity organizations.

SPMT 482 - Current Issues in Sport Management (3)

(3-0-3) This course is designed to immerse the sport management junior or senior level student in the in-depth study, discussion, reflection, and research of current topics and issues within the sport management profession.

SPMT 499C - Senior Capstone (3)

(3-0-3) This course is a culminating experience in which students will review and use the knowledge, skills and abilities acquired during their undergraduate program to prepare to take the professional exams required to secure desirable employment.

SSE - Space Science and Engineering

SSE 105 - Introduction to Electronic Processes (3)

(2-2-3) Emphasis will be placed on physical realization of electronic assemblies, fundamental electrical calculations, operation of basic test and measurement equipment, development of skills such as soldering, mechanical systems design, wiring, and packaging. Numerous projects will be undertaken by each student to facilitate development of these skills.

Corequisite: SSE 105L

SSE 120 - Satellites and Space Systems I (3)

(2-2-3) Introduction to satellites and space systems; orbital mechanics; the space environment; satellite applications; spacecraft design considerations; roles played by universities, industries, and government in space exploration and utilization; and future technologies of spacecrafts and satellites. Laboratory sessions will give hands-on experience in the fabrication and assembly of spacecraft components.

Prerequisite: MATH 174 or MATH 175 or ACT Math subscore of 22

Corequisite: SSE 120L

SSE 122 - Satellites and Space Systems II (3)

(2-2-3) SSE 122 is a continuation of SSE 120. It covers the topics that were introduced in SSE 120 in more detail with examples in developing spacecraft subsystems such as structures, electrical power systems, command and data handling, communications, thermal management and operations. Laboratory session will give hands on experience in the fabrication and assembly of spacecraft components.

Prerequisite: Take SSE 120 and MATH 174 or MATH 175

Corequisite: SSE 122L

SSE 123 - Concepts and Experiences in Energy (3)

(3-0-3) An interdisciplinary approach to the study of energy. Incorporates experiences and concepts from motion, heat, light, magnetism, electricity, radioactivity and sound waves. Equates with ETM 123, PHYS 123 and SCI 123. This course satisfies the Level 2 Knowledge NSC requirement for general education.

SSE 199 - Special Topics (1-6)

(1-6 hrs.)

SSE 210 - Spacecraft Mechanical Systems (3)

(2-2-3) This course provides the student with a first look at computer-assisted development of space vehicle structural and mechanical systems. The course will address fundamental issues of how to build spacecraft: designing structures for space and selecting optimal building materials. The response of space structures to the extreme thermal conditions, vibration environment during launch, response to the space radiation and vacuum environments will be considered. Students will develop skills in SolidWorks, parametric 3-D modeling, machined components design and machine tooling.

Prerequisite: SSE 120

Corequisite: SSE 210L

SSE 299 - Selected Topics in Space Science and Engineering (3)

(3-0-3) Investigation of specific topics in space sciences, astronautical engineering, satellite systems and space mission operations.

SSE 315 - RF Transmission Lines and Circuit Concepts (3)

(2-2-3) Studies using AC circuit theory combined with electromagnetic field concepts based on Maxwell's Equations and material effects. Areas of study include characteristic impedance, complex propagation constant, effects of dispersion, transmission line analysis, effects of matched and unmatched loads, and matching networks. Emphasis on practical applications and problem solving.

Prerequisite: PHYS 211 or consent of instructor

Corequisite: SSE 315L

SSE 320 - Spacecraft Electronic Systems (3)

(2-2-3) This course provides the student with an overview of and a beginning skillset in the design of space electronics systems. The development of space electronics systems including power systems, command and data handling systems, attitude determination and control systems, communications systems and payloads and payload interface systems require an understanding of electrical/electronic design, and electronics systems fabrication, and testing. Specific skills will be fostered in printed circuit board design and layout (using the Altium software system), optimization, fabrication, and testing. These processes are addressed through project-based learning.

Prerequisite: SSE 122, SSE 210 and PHYS 211

Corequisite: SSE 320L

SSE 324 - Principles of Radio Astronomy (3)

(3-0-3) A study of astrophysically interesting phenomena utilizing the techniques of the science of radio astronomy; topics include galactic structure, radio galaxies, cosmic jets and black holes, interstellar molecules and instrumentation in radio astronomy, with a major emphasis in the methods of research in experimental astrophysics. Equates with ASTR 324 and PHYS 324.

Prerequisite: PHYS 232 and ASTR 125

SSE 339 - Cooperative Education I (1-6)

(1-6 hrs.) Petition required. Participation in supervised work experience in a professional environment.

SSE 340 - Digital Control Systems for Space Applications (4)

(3-2-4) This course is a comprehensive introduction to digital control systems for space applications. A presentation of fundamental topics in digital controls is reinforced with hands-on laboratory experience. The course covers elements of real-time computer architecture; input-output interfaces and data converters; analysis and synthesis of sampled-data control systems using classical and modern (state-space) methods; analysis of trade-offs in control algorithms for computation speed and quantization effects. Laboratory projects emphasize practical digital servo interfacing and implementation problems with timing, noise and nonlinear devices.

Prerequisite: SSE 105 and SSE 122

Corequisite: PHYS 211 and SSE 340L

SSE 341 - Solid-State Electronic Devices & Applications (3)

(3-0-3) This course covers the fundamental concepts and operational principles of semiconductor devices and their applications. The course content includes semiconductor materials, carriers in semiconductors, energy bands, Fermi-Dirac distribution, p-n junctions, metal-semiconductor junction, field-effect transistors, bipolar junction transistors, high-speed transistors, solar cells, detectors and sensors as well as their applications, especially in space. The degradation and protection of semiconductor devices in space are introduced. Lab activities are embedded in the course.

Prerequisite: One of the following groups: 1. PHYS 211 or 2. EEC 141 and PHYS 232

SSE 360 - Advanced Space Systems (3)

(3-0-3) Advanced Space Systems Engineering provides an in depth view of the technologies, software, and processes needed to understand and develop spacecraft systems and instrumentation. Specifically, the course will cover the use of digital processors and software and place emphasis on the methods used in spacecraft communications, health monitoring and anomaly detection and resolution. The emphasis will be on how current technology is incorporated into the planning, designing, fabrication, integration and testing of modern space systems.

Prerequisite: SSE 340

SSE 370 - Flight Software Systems (3)

(2-2-3) An in-depth presentation of the internals of core flight software running on a real-time operating system (LinuxRT). Covered in this course are operating system hardware and software details, threading, process scheduling, device drivers, and input/output details.

Prerequisite: PHYS 232 and MATH 276

Corequisite: SSE 370L

SSE 380 - Materials Science for Space Applications (3)

(3-0-3) Materials fundamentals of atoms and molecules, atomic bonding, crystal structures and defects, atomic diffusion, thermal behavior, radiative and thermal degradation, solidification and phase diagrams are introduced. Various types of materials and coatings that function properly in the extreme conditions of the space environment, such as ionizing radiation, corrosion, erosion and extreme temperatures are studied. Materials studied include iron, aluminum, titanium, nickel and refractory alloys, polymers, ceramics and composites. The coatings cover radiation-, corrosion-, erosion-resistant and thermal coatings.

Prerequisite: MATH 175 and PHYS 231

SSE 399 - Selected Topics (1-4)

(1 to 4 hrs.) In-depth guided study of topics that either go beyond regular course work or that are not regularly offered in the curriculum.

SSE 431 - Space Plasma Physics (3)

(3-0-3) An introduction to plasma physics and its applications to space and astrophysical systems, with an emphasis on the Earth's environment in space. Topics will include the motion of charged particles in electromagnetic fields, the description of plasmas in the framework of one- and two-fluid approach, and its description in the framework of kinetic theory. Plasma equilibria, waves, and instabilities will also be discussed.

Prerequisite: PHYS 232

SSE 439 - Cooperative Education II (1-6)

(1-6 hrs.) Petition required. Participation in supervised work experience in a professional environment.

Prerequisite: SSE 339

SSE 442 - RF/Microwave Systems & Antennas (3)

(2-2-3) RF/Microwave systems and antennas design, analysis, fabrication, test and characterization. Transmission lines in general, introduction to waveguides, planar transmission lines, concept of impedance matching for optimum power transfer, measurement methods for transmission lines, introduction of S-parameters. Antennas in general, printed antennas, reflector antennas, fabrication techniques for printed antennas, impedance and radiation measurements for antennas. Microwave components used in systems such as filters, isolators, directional couplers and power splitters will also be covered.

Prerequisite: PHYS 232, PHYS 232A, and PHYS 211

Corequisite: SSE 442L

SSE 444 - Satellite Communications (3)

(2-2-3) The course covers fundamental concepts of satellite communications including satellite link modulation schemes, error-correction techniques, and spacecraft and ground station hardware and instrumentation. Equates with EEC 444.

Prerequisite: SSE 442 or EEC 344

Corequisite: SSE 444L

SSE 445 - Space Systems Communications Laboratory (1)

(0-2-1) Petition required. This laboratory course complements SSE 444/EEC 444 that covers fundamental concepts of satellite communications including satellite link modulation schemes, error-correction techniques, and spacecraft and ground station hardware and instrumentation. Students will participate in investigations in waveform properties, modulation schemes, antenna characteristics, antenna measurements, noise figures and communications link budgets.

Prerequisite: SSE 442

Corequisite: SSE 444/444L

SSE 460 - Spacecraft Sensors and Remote Sensing (3)

(3-0-3) Students will investigate the technologies involved in monitoring earth systems from space platforms and in measuring spacecraft environment parameters critical to the health and safety of a spacecraft. In addition to the environment, gathering information from other sensors is the primary function of most satellite missions. Students will investigate the parameters and considerations involved in sensors for specific applications. Remote sensing techniques associated with multispectral imaging, RADAR, and LiDAR will be investigated.

Prerequisite: 1. SSE 122 and 2. PHYS 202 or PHYS 232

SSE 464 - Astrodynamics (3)

(3-0-3) This course will help students to understand orbits and satellite motions, ranging from the two-body problem to interplanetary missions.

Prerequisite: PHYS 231

SSE 475 - Rocket Propulsion (3)

(3-0-3) This course will help students understand thermochemistry, propulsive parameters, liquid and solid rocket engines. Furthermore, it will provide a general overview regarding electric and satellite propulsion.

Prerequisite: PHYS 231

SSE 476 - Directed Research (1-6)

(1 to 6 hrs.) Participation in a research project under faculty guidance.

SSE 498 - Senior Design Project I (2)

(2-0-2) A directed research project will be designed, data will be collected and analyzed, in consultation with a faculty advisor. A primary literature search and research proposal will be completed using library facilities and current technology. This research project will culminate with a scientific paper and oral presentation in SSE 499C.

Prerequisite: SSE 360

SSE 499C - Senior Design Project II (3)

(3-0-3) Completion of the directed research project begun in SSE 498. A formal report that includes the basic literature search and appropriate experimental work will be prepared in a form suitable for submission to a scientific journal. A scientific oral presentation of the research will be made to the faculty. In addition, an oral presentation at a state, regional, or national scientific meeting will be encouraged.

Prerequisite: SSE 498

SWK - Social Work

SWK 210 - Orientation to Social Work (4)

(3-1-4) This course provides an introduction to contemporary fields of social work practice in both primary and secondary settings. The principal focus of the course is familiarization of students to the breadth and scope of professional social work intervention into contemporary societal problems.

SWK 230 - Social Welfare History & Ethics (3)

(3-0-3) The dominant values of American society that influence both social welfare policy and social work practice are explored through a study of the historical evolution of the institution of social welfare from the colonial period to the present in this country. Equates with GST 230.

SWK 300 - Criminogenic Family (3)

(3-0-3) The course focuses on family risk factors for later delinquency and criminal behavior as well as preventative intervention and treatment. This course examines a variety of family issues including child maltreatment, domestic violence, family alcoholism, drug addiction, family chaos, inadequate or neglectful parenting, corporal punishment, which are known risk factors for later criminal behavior. Students gain a general understanding of the macro-level processes that have detrimental effects on family functioning and family structure. Equates with CRIM 300 and GST 302.

SWK 301 - Family Violence: An International Perspective (3)

(3-0-3) A comparative approach of family violence in the United States and Canada are the primary focus of this course but may also include other countries. Family violence is divided into four topics: partner/spousal abuse, violence against children and youth by family members, family violence against older adults and cultural issues. Content covered within these areas include: historical overview, definitions, theoretical frameworks, prevalence, incidence, research, responses and legislation. Equates with GST 303.

SWK 302 - Inside Out Prison Exchange Seminar (1)

(1-0-1) This one-hour course must be taken with the CRIM 303 course as the process course for the outside students. This course will provide an opportunity for campus students to discuss their interactions with the inside students the previous day as well as interact appropriately with colleagues or other outside students. Equates with CRIM 302.

Prerequisite: 9 hours CRIM

SWK 303 - Special Topics: Inside Out Prison Exchange Program (3)

(3-0-3)

The "Inside-Out" Prison Exchange Program is an opportunity for a small group of undergraduate students (outside students) from Morehead State University's campus and a group of inside students (inmates from Little Sandy Correctional Complex) in Sandy Hook, Kentucky, to exchange ideas and critically examine political, economic, and/or social issues in American society. This may include prisoner re-integration, social problems, global problems, poverty, inequality, social policy, the family, crime and justice and other sociological or social work related topics. See the Inside-Out National Prisoner Exchange Program at http://www.insideoutcenter.org. Equates with CRIM 303.

Prerequisite: 9 hours CRIM

SWK 306 - Juvenile Delinquency (3)

(3-0-3) This course examines the extent, ecological distribution, and theories of delinquency in contemporary American society, including a critical examination of trends and methods of treatment of delinquency. Equates with CRIM 306 and SOC 306.

Prerequisite: SOC 101

SWK 310 - Field Experience in Social Work (3)

(1-2-3) This course includes observation and work experience in a social work agency under the supervision of a professional.

SWK 315 - Child Welfare Services (3)

(3-0-3) Students learn local, state and national policies and programs designed to provide for the care, protection and support of children.

SWK 319 - Responding to Military and Veteran Populations (3)

(3-0-3) The purpose of this course is to understand military culture, the stressors associated with military lifestyle and the cycles of deployment that service members and their families navigate. Different military contexts (e.g. active duty, guard/reserve, veteran) are explored. Ethical issues for working in this environment are considered. Theory-based and research-informed strategies to intervene with combat related trauma, co-morbid disorders, traumatic brain injuries, and psychosocial issues with families are reviewed. Military related policies are also examined as well as veteran systems of care. Students completing this course will have a more in-depth understanding of and ability to work with the military, veterans, and their families in a variety of settings. Equates with CRIM 319 and SOC 319.

SWK 320 - Human Behavior in the Social Environment - Conception to Young Adulthood (3)

(3-0-3) Students study the development of human behavior in the context of social systems. Primary emphasis is on an exploration of needs and tasks of individuals, groups, families, organizations and communities during various life-stages of growth and development. Environmental concerns affecting women, minorities and other special populations are examined.

Corequisite: SWK 325

SWK 321 - Human Behavior in the Social Environment - Middle Adulthood to Death (3)

(3-0-3) Students study the development of human behavior in the context of social systems. Primary emphasis is placed on an exploration of needs and tasks of individuals, groups, families, organizations and communities during various life-stages of growth and development. Environmental concerns affecting women, minorities and other special populations are examined.

Prerequisite: SWK 320

SWK 324 - Social Work Research Methods (3)

(3-0-3) This course provides an examination into the premises and practices of social science research. When addressing quantitative and qualitative approaches, students explore the issues of research designs and data collection and analysis. In the end, students are able to determine ways in which empirical studies can enhance their subsequent careers in the field of human services.

SWK 325 - Social Work Generalist Perspective (3)

(3-0-3) This course introduces students to knowledge, values and skills, for generalist social work practice. It prepares students to enhance the well-being of people and ameliorate environment conditions that affect them adversely. The focus is on the planned change or Generalist Intervention Model within a strengths perspective.

Prerequisite: SWK 210

Corequisite: SWK 320

SWK 326 - Generalist Practice Lab (3)

(1-2-3) This course provides students with an opportunity to apply the knowledge, skills and values gained in SWK 325 through a lab (field) experience (120 hours). Students will apply the Generalist Intervention Model in an agency setting. They also will learn more specifics about the different areas of social work practice. Students will continue to practice attending skills and ethical social work behavior in a social service agency.

Prerequisite: SWK 325

Corequisite: SWK 321

SWK 330 - Health Structures and Behavior (3)

(3-0-3) This course examines the social, cultural and psychological factors that influence health and health behaviors. Occupational and structural contexts associated with health and health care are explored, including an overview of health care delivery policies and the roles of various health professionals. Equates with SOC 330.

SWK 333 - Beginning Helping Skills for Human Service Professionals (3)

(3-0-3) This course provides students with knowledge and beginning helping skills that can be applied to assist individuals who are having social/emotional problems.

SWK 334 - Women and Partner Violence (3)

(3-0-3) This course offers social science and experiential exposure to theories, policies, professionals and skills associated with women's experiences with intimate partner violence. The unique challenges of women in rural settings, women of color, and women in same-sex relationships are also explored. Equates with CRIM 333, SOC 333 and GST 333.

SWK 335 - Families in Modern Society (3)

(3-0-3) Examines 21st century marriage and families as diverse social institutions. Social and behavioral theories are used to analyze how economics, education, race/ethnicity, gender, sexual norms and other social institutions impact the family's role, composition, organization, and interpersonal relationships within. Equates with SOC 335 and GST 335.

SWK 337 - Sociology of Food (3)

(3-0-3) A sociological analysis of the politics, economy and culture of food. Topics include food consumption patterns, body image, health, and eating disorders; food and individual, community and cultural identity; class, ethnic, and gender-based food patterns; modern food production patterns, inequality and the environment; social food movements and social justice. Equates with CRIM 337, GST 337, and SOC 337.

SWK 340 - Introduction to Mental Health and Mental Illness (3)

(3-0-3) This course provides an introductory review of the field of mental health. Societal attitudes, stigma, and treatment of individuals with mental illnesses throughout history will be surveyed, with emphasis on present-day attitudes, and the public and private agency systems and professional disciplines currently addressing mental health needs. Basic symptoms and criteria for common mental disorders will be examined, along with treatment approaches and the types of ethical concerns that could arise in the care of the mentally ill.

Cross-Listed as: GST 340

SWK 343 - Religion and Sexuality (3)

(3-0-3) This course explores the intersection between sexuality and religion in contemporary societies. Broad topics this course covers include an analysis of fundamentalist thought, metaphysics, and sociology of religion through the lens of sexual behavior and sexual orientation. Equates with SOC/CRIM/GST 343.

Prerequisite: 3 hours from SOC, CRIM, SWK, GST or consent of instructor

SWK 345 - Law and Social Work (3)

(3-0-3) This course focuses on legal and legislative processes involving licensing and certification of the profession; rights of clients and special populations; access to legal and social services; testifying before judicial and legislative bodies; and other legal issues and concerns facing social work practitioners.

SWK 347 - Sociology of Happiness (3)

(3-0-3) Drawing on social science literature, this course uses the sociological imagination to analyze the relationship between macro level social forces and personal well-being. Equates with SOC 347.

Prerequisite: SOC 101

SWK 355 - Sociology of the Body (3)

(3-0-3) An introduction to the sociological study of the body. Students explore the multifaceted interplay between culture, groups, identity, the Self, and the body. The social and cultural construction of bodies related to inequality based on race, class, gender, sexuality, disability and other dimensions are examined. Equated with GST 355, SOC 355, and CRIM 355.

SWK 358 - Child Abuse and Neglect (3)

(3-0-3) This course is designed to provide a comprehensive introduction to child abuse and neglect from a social work perspective. Students learn the extent of the problem, effects on children, treatment issues and social worker's role in a multidisciplinary team approach.

SWK 360 - Crisis Intervention (3)

(3-0-3) This course provides an overview of strategies for addressing critical situations requiring immediate intervention. Subjects include threatened suicide, rape trauma, domestic violence, violent episodes of mental illness and physical assaults.

SWK 365 - Grant Development (3)

(3-0-3) This course offers a broad overview of external funding for social service agencies with particular attention to funding for the nonprofit sector. An overview of trends in philanthropy and the fundamental concepts and process of developing a grant proposal will be provided. Students will practice funding search skills and develop the specific components of a grant proposal.

SWK 380 - Social Work Practice in Health Care (3)

(3-0-3) This course examines the practice of social work in health care settings. The roles and tasks of social workers in hospital, long-term care, hospice and home health care settings are discussed and analyzed. Special emphasis will be placed on rural issues that impact practice delivery in these settings.

SWK 381 - Race, Class, Gender and Crime (3)

(3-0-3) This course focuses on the intersection of race, class and gender membership with regard to treatment within criminal justice system by police, judges, juries and actual sentencing decisions including the death penalty. The course also provides insights about the unique types of crime most likely to be perpetrated by specific demographic groups. Students are also exposed to criminological theories that explain criminal justice system disparity, discrimination, and differences in actual offending patterns. Equates with CRIM 380, GST 380 and SOC 380.

SWK 394 - Introduction to Substance Use Disorders (3)

(3-0-3) Admission into the Social Work program is required. This course introduces students to the topic of substance use disorders. This course is designed to challenge and develop the student's knowledge of and thinking about substance use disorders in contemporary society. It provides clinical and scientific knowledge about the nature of substance use, the physiological aspects of substance use disorders, and the effect of substance use disorders on individuals, families, communities, health, and development. It also introduces the student to current evidence-based treatment and prevention approaches. The course helps students identify and address issues related to substance use disorders across population groups and consider how these issues impact a wide variety of social service, healthcare, and criminal justice systems.

Prerequisite: Admission to Social Work Program

SWK 399 - Special Class (3)

(1 to 3 hrs.) Unique topics and learning experiences that supplement regular course offerings. May be repeated in additional subject areas.

SWK 400 - Special Problems (1-3)

(1 to 3 hrs.) Students arrange with department to study a particular topic in the social work field.

SWK 416 - Working with Offenders (3)

(3-0-3) Students learn the basic structure of the counseling process with offenders, including techniques and practice skills. Equates with CRIM 416.

SWK 420 - Social Work Administration & Management (3)

(3-0-3) This course examines the history, nature, organizational structure, and philosophy of the administration of public programs of income maintenance and other welfare services, consideration of the role of voluntary agencies.

SWK 424 - Social Work Micro Practice (3)

(3-0-3) In this course, students develop skills related to interviewing, data collection, assessment, goal development, interventive strategy formulation, contracting, interventive counseling, and monitoring/evaluation design as they relate to the application of the social work method to micro-level individual client systems.

Prerequisite: SWK 325

SWK 426 - Social Work Mezzo Skills (3)

(3-0-3) Students continue the development of skills associated with the application of the social work method to mezzo-level therapeutic groups, task-centered groups, marital and family client systems.

Prerequisite: SWK 325

SWK 430 - Social Policy and Planning (3)

(3-0-3) Students apply a framework of analysis to a variety of social welfare policies. This course provides an exposure to social-economical-political-legal issues affecting social welfare policy formulation, selection of delivery systems and program funding.

Prerequisite: SWK 325

SWK 435 - Group Dynamics (3)

(3-0-3) This course is designed to give the student an understanding of group methods and the theories underlying the use of groups in the helping process. Special emphasis is given to the processes that affect the development and functioning of all types of groups.

SWK 441 - Issues in Aging (3)

(3-0-3) This course introduces students to the field of gerontology and the broad spectrum of issues involved in the study of aging. Social, physical, psychological, and cognitive aspects of aging are examined, and implications for social services and policy are discussed. Equates with SOC 441.

SWK 445 - Death and Dying (3)

(3-0-3) Situates an analysis of death and dying within social processes and social problems. This course includes a practical set of strategies for working with dying persons, their families and grief. Equates with SOC 445.

SWK 451 - Quantitative Data Analysis (3)

(3-0-3) This course covers survey-based data preparation, computer assisted analysis and report writing for the social sciences. Equates with SOC 451.

Prerequisite: SOC 450 or consent of instructor

SWK 458 - Social Work Interview Methods in Child Maltreatment (3)

(3-0-3) This course is designed to teach social work practice skills specific to child abuse and domestic violence. Students will learn interviewing and assessment skills, case planning and decision making, guidelines for court involvement, as well as cultural considerations in child rearing practices and communication/gender issues.

SWK 469 - Animals and Society (3)

(3-0-3) An examination of the interactions and emergent relationships between humans and animals from a sociological perspective. Equates with CRIM 469 and SOC 469.

SWK 470 - Introduction to Substance Use Disorder Counseling (3)

(3-0-3) This course will introduce students to evidence-based approaches for working with persons with substance use disorders. Students will explore assessment and diagnosis of substance use disorders, treatment planning, individual counseling, and group and family counseling, and will learn about unique considerations when working with special populations and diverse cultures.

Corequisite: SWK 471

SWK 471 - Screening, Assessment, and Treatment of Substance Use Disorders (3)

(3-0-3) This course introduces students to the screening, assessment, and treatment of substance use disorders. Students will explore a broad range of topics, including the medical and psychosocial models of substance use disorders, assessment tools, various treatment options, co-occurring disorders, the impact of substance use disorders on the family, and the role of self-help groups. Students will be introduced to various approaches for treating SUDs, such as motivational interviewing and medication assisted treatment.

Corequisite: SWK 470

SWK 472 - Approaches to Chemical Dependency Treatment I (3)

(3-0-3) Students learn the basics for case management of a substance abuse client including writing case notes, developing a treatment plan, referrals and writing formal reports for court.

Prerequisite: SWK 470 & SWK 471

Corequisite: SWK 473

SWK 473 - Contemporary Treatment Approaches for Substance Use Disorders (3)

(3-0-3) This course gives students a more in-depth examination of some of the current evidence-based treatment approaches used with persons with substance use disorders. Students will gain knowledge and skills related to the current treatment modalities and will be able to compare and contrast them, determining which treatment(s) are best suited for each individual client.

Corequisite: SWK 472

SWK 474 - Practicum in Substance Use Disorder Treatment (3)

(1-2-3) Integration of theory and method to actual case situations within a 120-hour professionally supervised field experience within a selected substance use disorder treatment setting.

Prerequisite: SWK 470, SWK 471, SWK 472 and SWK 473

SWK 497 - Practicum in Social Work (8)

(0-8-8) Students integrate theory and method to actual case situations assigned within a 400-hour professionally supervised field experience within a selected human service organization.

Prerequisite: SWK 424, SWK 426 and SWK 430

Corequisite: SWK 498

SWK 498 - Social Work Macro Practice (3)

(1-2-3) Students continue learning the skills associated with the application of the social work method to macro-level organizational, neighborhood and community client systems.

Prerequisite: SWK 424, SWK 426 and SWK 430

Corequisite: SWK 497

SWK 499C - Senior Seminar (3)

(3-0-3) Preparation for applying and interviewing for prospective professional employment, taking state merit examinations, taking licensing and certification tests and enrolling within graduate programs of social work. Discussions also focus upon issues at the workplace.

Prerequisite: SWK 424, SWK 426 and SWK 430

Corequisite: SWK 497

THEA - Theatre

THEA 100 - Fundamentals of the Theatre (3)

(3-0-3) An introduction to the theatre as an art form, its historic and organizational structure. For theatre majors and minors.

THEA 101 - Voice and Articulation (3)

(3-0-3) Essentials of distinct utterance, phonetic transcription and uses of the vocal mechanism.

THEA 105 - Modern Dance Technique (3)

(3-0-3) A study and application of basic modern dance technique.

THEA 107 - Introduction to Dance Performance Art (3)

(3-0-3) A foundation course in understanding dance as a performance art that fosters creativity, education and nonverbal communication.

THEA 110 - Introduction to Theatre (3)

(3-0-3) This course is an introduction to theatre as an art form, including its historical and organizational structures and satisfies the area studies-humanities for general education. By spending class and homework time thinking about philosophical assumptions, cultural practices and historical moments different than our own (in Classical Greece, Elizabethan England, Medieval Japan, Modern Europe, 20th century United States and elsewhere), students will connect themselves to universal human impulses, gain perspective on the varieties of human expression and experience and consider opportunities for contributing to their communities, both artistically and civically. This course satisfies the Level 2 Knowledge HUM requirement for general education.

THEA 177 - Theatre Production and Performance Practicum (1)

(0-4-1) Practical experience and opportunities in theatre production and performance.

THEA 200 - Introduction to Dramatic Literature (3)

(3-0-3) Representative dramatic literature from Greek antiquity to the present.

THEA 205 - Intermediate Modern Dance (3)

(3-0-3) A continued study and application of modern dance technique.

Prerequisite: THEA 105

THEA 207 - Dance Improvisation (3)

(3-0-3) A study of improvisational tools used for creating and exploring dance.

THEA 208 - Beginning Ballet (3)

(1-4-3) A study and application of basic ballet techniques.

THEA 210 - Technical Production (3)

(1-4-3) A study of the technical elements in theatrical production; set construction, lighting and sound.

THEA 211 - Costume Construction I (3)

(3-0-3) A course in basic costume construction techniques.

THEA 225 - Introduction to Theatre Production Design (3)

(3-0-3) A study of design and technical fundamentals of theatre including scenery, lighting and costumes. The fundamentals include concept and design development, research and communication skills.

THEA 277 - Theatre Production and Performance Practicum (1)

(0-4-1) Practical experience and opportunities in theatre production and performance.

THEA 284 - Acting Techniques (3)

(3-0-3) A study of acting from both the aesthetic and the practical viewpoints; exercises in pantomime and vocal techniques.

THEA 305 - Advanced Modern Dance Technique (3)

(3-0-3) An advanced study and application of modern dance technique.

THEA 307 - Dance Composition (3)

(3-0-3) An exploration of movement resources used for constructing dance, developing choreographic skills and interpreting movement.

Prerequisite: THEA 107 or THEA 207

THEA 308 - Intermediate Ballet (3)

(1-4-3) A further study of ballet techniques and profiles of famous dancers.

Prerequisite: THEA 208

THEA 309 - Tap Dancing (3)

(1-4-3) A study and application of tap dance techniques.

THEA 310 - Stage Movement (3)

(3-0-3) The study of how the human body functions in space and the application of specialized techniques such as improvisation, mask work and stage combat to dramatic creation.

THEA 311 - Theatre Seminar I (3)

(3-0-3) Development of proficiency in specific areas of theatre. May be repeated if student has not received course credit for topic.

Prerequisite: THEA 100

THEA 312 - Theatre Seminar II (3)

(3-0-3) Development of proficiency in specific areas of theatre. May be repeated if student has not received course credit for topic.

Prerequisite: THEA 100

THEA 313 - Theatre Seminar III (3)

(3-0-3) Development of proficiency in specific areas of the theatre. May be repeated if student has not received course credit for topic.

Prerequisite: THEA 100

THEA 314 - Acting for the Camera (3)

(3-0-3) Commercial and TV acting will be explored. The course includes live taping of selected material and the fundamentals of working with the camera, staging and shooting out of sequence.

THEA 315 - Stage Makeup (3)

(2-2-3) Study and application of makeup and techniques for the stage.

THEA 316 - Stage Properties (3)

(2-2-3) The study and practice of stage properties, their construction, acquiring and repair; the study of furniture history.

THEA 317 - Scene Painting (3)

(2-2-3) The study and practice of paints and painting techniques as they apply to the scenic artist.

THEA 318 - Hip-Hop and Urban Dance (3)

(3-0-3) A historic overview and application of hip-hop and urban dance.

THEA 319 - Jazz Dance (3)

(3-0-3) A study and application of jazz dance technique.

THEA 321 - Stage Lighting (3)

(2-2-3) The mechanical and artistic approach to stage lighting; study of electrical theory and instrument utilization.

Prerequisite: THEA 210 and THEA 225

THEA 322 - Scene Design (3)

(2-2-3) The study of design theories with the creation and development of scene design projects and rendering techniques.

Prerequisite: THEA 210 and THEA 225

THEA 324 - Dance History (3)

(3-0-3) A study of the origins, profiles and evolution of dance in America.

THEA 325 - Costume History (3)

(3-0-3) A study of fashion and clothing trends throughout history.

THEA 326 - Costume Design (3)

(3-0-3) A study of fashion and clothing trends throughout history.

Prerequisite: THEA 225

THEA 328 - Creative Sewing for the Theatre II (3)

(1-4-3) A course in creating original patterns for stage costumes.

THEA 340 - Auditioning (3)

(3-0-3) This course is designed to prepare students for the professional world of acting with particular emphasis on the process of auditioning. Each student will prepare and perform multiple audition pieces under a variety of circumstances most often experienced by the professional actor.

THEA 354 - Theatre History (3)

(3-0-3) A study of the origins and development of theatre.

Prerequisite: THEA 100 or THEA 110

THEA 355 - Theatre History II (3)

(3-0-3) A study of the origins and development of theatre in the 19th and 20th centuries.

Prerequisite: THEA 100 or THEA 110

THEA 370 - Children's Theatre (3)

(3-0-3) A concentrated study of the problems involved in the organization and production of plays for and with children.

Prerequisite: THEA 100 or THEA 110 or consent of the department chair

THEA 375 - Creative Dramatics (3)

(3-0-3) An analysis and application of principles of creative dramatics as applied to classroom curricular activities. Field experience required for theatre majors pursuing the teaching option.

THEA 377 - Theatre Production and Performance Practicum (1)

(0-4-1) Practical experience and opportunities in theatre production and performance.

Prerequisite: ART 109

THEA 380 - Play Directing (3)

(3-0-3) Theories and principles of directing; director's interpretation; casting; planning acting and making the prompt-book.

Prerequisite: THEA 100 or THEA 110, THEA 225 and THEA 284

THEA 408 - Advanced Ballet (3)

(1-4-3) Advanced study of ballet techniques and profiles of historical dances.

Prerequisite: THEA 308

THEA 412 - Playwriting (3)

(3-0-3) Analysis of the structure of plays and the writing of original scripts.

Prerequisite: THEA 100 or THEA 200

THEA 413 - Advanced Play Directing (3)

(3-0-3) To develop greater proficiency in techniques of directing as related to specific productions and staging problems.

Prerequisite: THEA 380

THEA 430 - Summer Theatre III (4)

(4-0-4) Advanced assignments in set and costume design or advanced acting and directing. May be repeated.

THEA 452 - Early Dramatic Literature (3)

(3-0-3) A detailed study of representative plays from the Greeks to mid-19th century.

THEA 453 - Modern Dramatic Literature (3)

(3-0-3) A detailed study of the drama from the growth of realism to the present day.

THEA 455 - Dramatic Criticism (3)

(3-0-3) Dramatic theory and criticism as developed through Aristotle, Horace, the Middle Ages, the Renaissance and the 20th century.

Prerequisite: THEA 100 and THEA 200

THEA 462 - Advanced Acting (3)

(3-0-3) Advanced study of acting, including analysis and development of characters in acting situations.

Prerequisite: THEA 284

THEA 463 - Advanced Costuming (3)

(2-2-3) Designing costumes for theatrical productions, making patterns and the fabrication of garments for the stage.

Prerequisite: THEA 326

THEA 464 - Advanced Scene Design (3)

(2-2-3) To develop greater proficiency in the skills of scenic design as applied to specific problems and theatrical productions.

Prerequisite: THEA 322

THEA 465 - Advanced Stage Lighting (3)

(2-2-3) To develop proficiency in the skills of lighting productions; to research topics and special problems pertaining to stage lighting.

Prerequisite: THEA 321

THEA 475 - Theatre Education Secondary Methods (3)

(3-0-3) *Restriction: TEP Admission.* This course will prepare students who plan to pursue a career in teaching theatre at the K-12 level. Specifically, this course will target best practices and methods for teaching, assessing, coordinating theatre classes, and coordinating theatre programs at the secondary level. It is recommended that a student have completed one of the following: THEA 321, THEA 322, or THEA 326.

Prerequisite: THEA 100 or THEA 110, THEA 375, THEA 370, and THEA 225

THEA 476 - Special Problems in Theatre (1-3)

(1 to 3 hrs.) Independent study and research of an area of the student's choosing. Requires completion of paper or other tangible evidence of the results of the study.

THEA 477 - Theatre Production and Performance Practicum (1)

(0-4-1) Practical experience and opportunities in theatre production and performance.

Prerequisite: ART 109

THEA 484 - Styles of Acting (3)

(3-0-3) A study of techniques for creating characters from various dramatic styles and historical periods through research and performance.

Prerequisite: THEA 284

THEA 499C - Senior Seminar Theatre (3)

(3-0-3) This course is designed to assess your knowledge, skills and progress in your field of study in the Department of Music, Theatre and Dance. It will provide you with an opportunity to advance your skills in self-assessment, job procurement processes, procedures and materials while preparing you for the professional job market.

Prerequisite: 18 hours in THEA

UTCH - MSUTeach

UTCH 100 - Step 1: Inquiry Approaches to Teaching (1)

(1-0-1) Students who want to explore teaching careers become familiar with lesson plan development by writing, teaching, and observing lessons in an elementary school class. While students build and practice inquiry-based lesson design skills, they also become familiar with and practice classroom management in the elementary school setting. As a result of the Step 1 experiences, students are able to decide to continue to explore teaching as a career by registering for Step 2, and ultimately, the remainder of the MSUTeach curriculum leading to teacher certification. Clinical experiences are integral to this class.

UTCH 150 - Step 2: Inquiry-Based Lesson Design (1)

(1-0-1) In Step 2, students who want to explore teaching careers become familiar with the middle school setting by observing and discussing the middle school environment, and by teaching lessons to middle school students. Step 2 students build upon and practice inquiry-based lesson design and questioning skills that were developed in Step 1. The focus shifts to middle school (rather than elementary school) curricula and students. Step 2 students will experience teaching with technology. Step 2 students, generally team-teaching with a partner, are assigned to either a mathematics or science Mentor Teacher in a local middle school to observe and teach inquiry-based lessons. Field experiences are integral to this course.

Prerequisite: UTCH 100 or permission of instructor

UTCH 200 - Knowing and Learning in Mathematics and Science (3)

(3-0-3) This course focuses on knowing and learning in secondary mathematics and science as understood from a multidisciplinary perspective. This course is not simply a general survey of theories. Instead, the primary goal is to provide students with the opportunity to identify theories and employ these theories to guide their own practice. Knowing and Learning is committed to the idea that practice and theory build on each other. Any teaching practice is guided by some theory of how people learn. If students are not aware of this, they are likely to adopt teaching practices without considering the full implications of theory behind them.

UTCH 250 - Perspectives on Science and Mathematics (3)

(3-0-3) This course is a survey of the perspectives of science and mathematics from antiquity to the modern day. This survey will examine the cultural, social, and intellectual influences on the development of the sciences and mathematics. Reading and writing intensive. This course satisfies the Level 3 Global Cultures HUM requirement for general education.

UTCH 300 - Classroom Interactions (3)

(2-2-3) *Restriction: Admission to TEP.* Classroom Interactions continues the process of preparing you to teach mathematics, science, and engineering by providing opportunities to apply theories of learning developed in Knowing and Learning in instructional settings. You will design and implement instructional activities informed by your own understanding of what it means to know and learn mathematics and science, and then evaluate the outcomes of those activities on the basis of student artifacts (i.e. what students say, do, or create). An important focus of the course is on building your awareness and understanding of equity issues and their effects on student learning. Providing accommodations to meet the needs of all students is the heart of good teaching. Classroom Interactions is centered on a close examination of the interplay between teachers, students, content, and the world beyond schools, and how such interactions enable students to develop deep conceptual understanding. You will learn how content and pedagogy combine to make effective teaching.

Prerequisite: UTCH 100, UTCH 150, UTCH 200, and Admission to TEP

UTCH 315 - Functions and Modeling (3)

(3-0-3) Students will engage in lab-based activities designed to strengthen and expand knowledge of the topics in secondary mathematics, focusing especially on topics from precalculus and the transition to calculus. Students will explore a variety of contexts that can be modeled using families of functions, including linear, exponential, polynomial and trigonometric functions. Topics involving conic sections, parametric equations and polar equations will be included. Explorations will involve the use of multiple representations, transformations, data analysis techniques (such as curve fitting) and interconnections among geometry, probability, and algebra. Most labs will include significant use of various technologies, including computers, calculators and multimedia materials. The use of quantitative approaches (for example to rate of change, limits and accumulation) and building relationships between discrete and continuous reasoning will be recurrent themes. Equates with MATH 315.

Prerequisite: MATH 175

UTCH 360 - Research Methods (3)

(2-2-3) This course provides students the opportunity to solve scientific problems and make scientific presentations. A key component of the course is intensive coaching of students in the methods of science by

Natural Sciences faculty. Topics in the course include experimental design, instrument calibration, data analysis, laboratory safety, and the use of human subjects. Data analysis techniques discussed in the course include mathematical modeling of data (such as function fitting), basic statistical analysis including standard error, the meaning of p-values, and hypothesis-testing. Students will design and conduct four different scientific inquiries and present the results of these in both written and oral formats consistent with the standards of the scientific community.

UTCH 399 - STEM Education Topics and Practices (1-3)

(1 to 3 hrs.) Selected topics in STEM Education. Up to 30 clinical hours may be required for successful completion. May be repeated.

UTCH 410 - Project-Based Instruction (3)

(2-2-3) *Restriction: Admission to TEP.* PBI is based on the premise that project-based instruction engages learners in exploring authentic, important, and meaningful questions of real concern to secondary students. Project-based instruction promotes equitable and diverse participation and engages high school students in learning. Students design full units of connected lessons - a skill that is required in Apprentice Teaching. Students synthesize a number of the major principles and themes of the MSUTeach program as they develop an intellectually challenging project-based instructional unit. This course initially provides for student experiencing PBI through a unit project to explore and develop usable materials to accommodate special populations in the classroom. PBI incorporates a variety of instructional approaches, focusing on differentiating between project-based instruction and other instructional methods.

Prerequisite: UTCH 200, UTCH 300 (can be taken concurrently with permission of instructor), and Admission to TEP

UTCH 450 - Apprentice Teaching (12)

(12-0-12) *Restriction: TEP Admission.* Registration is limited to MSUTeach students who have met the MSUTeach Program requirements. Apprentice Teaching course is a culminating experience for MSUTeach students that provides them with the tools needed for their first teaching position. In Apprentice Teaching, students are immersed in the expectations, processes, and rewards of teaching. Apprentice Teaching is comprised of teaching in local public secondary schools and a weekly seminar (that meets once every three weeks on campus and all other meetings are online), which brings apprentice teachers together with University master teachers to share experiences and work on solutions to problems they encounter in the field.

VET - Veterinary Technology

VET 108 - Veterinary Clinical Anatomy (3)

(2-2-3) A basic comparative anatomy of domestic animals with an emphasis on the structure and function of the major organ systems. The laboratory will include identification of anatomical structures.

Corequisite: VET 108L

VET 112 - Animal Care Techniques I (4)

(2-4-4) A study of basic care and management of the canine, feline and equine species encountered in veterinary practice. The laboratory will include essential tasks related to the handling, restraint, treatment and routine care of animals.

VET 213 - Animal Care Techniques II (4)

(2-4-4) A study of basic care and management of common laboratory animal species and basic veterinary surgical nursing. The laboratory will include essential tasks related to the handling, restraint, treatment and routine care of laboratory animals, surgical nursing techniques, personnel, instrumentation equipment and facilities.

Prerequisite: C or better in VET 108 and VET 112

Corequisite: VET 213L

VET 218 - Introduction to Veterinary Laboratory Techniques (4)

(3-2-4) An introductory course in veterinary laboratory techniques, including comparative hematology and parasitology of domestic animals. The clinical aspects of laboratory exams and the theory behind the tests utilized in a veterinary or biomedical laboratory will be emphasized. Hematology concepts, laboratory tests and applications of information from blood analysis are discussed in lecture. Comparative parasitology and coprology include identification of external and internal parasites, knowledge of parasite life cycles, zoonoses and commonly performed laboratory exams.

Prerequisite: "C" or better in VET 108 and VET 112

Corequisite: VET 218L

VET 219 - Surgical Nursing (3)

(2-2-3) A study of basic care and management of basic veterinary surgical nursing for small animals, large animals and laboratory animals. The laboratory will include essential tasks related to surgical nursing techniques and personnel and the handling and routine care of instrumentation, equipment, and facilities.

Prerequisite: "C" or better in VET 108 and VET 112

Corequisite: VET 219L

VET 245 - Veterinary Physiology and Pharmacology (4)

(3-2-4) This course will study the mechanisms that control normal life processes in the animal body. This course will also emphasize those body systems that are of primary concern during the administration of anesthesia and other pharmacological procedures. The student will learn the specific anesthetic agents and other pharmacologic agents that are used in veterinary medicine, their proper dosages, side effects and routes of administration.

Prerequisite: "C" or better in MATH 131 or higher

Corequisite: VET 245L, VET 108, and VET 112

VET 246 - Anesthesia and Analgesia (2)

(2-0-2) The purpose of this course is to study the mechanisms that control functional body processes during the induction, maintenance and recovery of the anesthetized patient and to become familiar with the protocols necessary to control pain associated with surgery or traumatic injury. The student will learn specific anesthetic agents and pharmaceuticals used to control pain that are used in veterinary medicine, appropriate clinical indications, their proper dosages, side effects, and routes of administration. The student will become adept at monitoring the anesthetized patient for proper vital signs and appropriate level of anesthesia. The student will also become proficient at evaluating levels of pain in patents and when to administer pain management measures for clinical situations.

Prerequisite: "C" or better in VET 108 and VET 112

VET 257 - Concepts of Large Animal Diseases I (2)

(2-0-2) This foundational course will teach technicians the methodology for studying disease pathophysiology and technical skills for diagnosis and treatment of large animal patients. Students are given foundational health and disease lectures and case scenarios with realistic client historical information. The student is expected to research each learning issue and report to the class their findings. The students are evaluated on their level of knowledge about the disease process, their participation in clinical discussions, and the focus of their methodology for determining appropriate diagnostic testing.

Prerequisite: "C" or better in VET 213, VET 218, and VET 245

Corequisite: VET 261

VET 258 - Small Animal Medicine and Surgery I (2)

(2-0-2) A study of clinical procedures, techniques and preventive medicine principles related to assisting the practicing veterinarian with small animal clinic cases, hospital management, and client education related to companion animal practice. Some evening and weekend duties are required.

Prerequisite: "C" or better in VET 213, VET 218 and VET 245

Corequisite: VET 262

VET 259 - Veterinary Clinical Pathology I (2)

(2-0-2) A course in veterinary clinical pathology, including topics in hematology and parasitology and in introduction to clinical chemistry, serology and urinalysis. The clinical aspects of laboratory exams and the theory behind the tests utilized in a veterinary or biomedical laboratory will be emphasized. Concepts, laboratory tests and application of information from laboratory analysis are discussed in lecture.

Prerequisite: "C" or better in VET 213, VET 218, and VET 245

Corequisite: VET 264

VET 260 - Veterinary Diagnostic Imaging (2)

(2-0-2) The purpose of this course is to study the principles for diagnostic imaging and imaging procedures and techniques designed to provide diagnostic information in small and large animal radiology and ultrasonography.

Prerequisite: "C" or better in VET 213, VET 218, and VET 245

Corequisite: VET 265

VET 261 - Large Animal Clinics I (1)

(0-3-1) This foundational clinical experience will teach technicians the practical and applied methodology for disease diagnostics and technical skills for treatment of large animal patients. Students are given foundational health and disease clinical sessions with actual patients. The students are evaluated on their level of skill and knowledge about the patient, their participation in clinical discussions and patient care, and the focus of their methodology for determining appropriate diagnostic testing and treatment of the patient.

Prerequisite: C or better in VET 213, VET 218, and VET 245;

Corequisite: VET 257

VET 262 - Small Animal Clinics I (1)

(0-3-1) A study of clinical procedures, techniques and preventive medicine principles related to assisting the practicing veterinarian with small animal clinical cases, hospital management and client education related to companion small animal practice. Some evenings and weekend duties are required.

Prerequisite: "C" or better in VET 213, VET 218, and VET 245

Corequisite: VET 258

VET 264 - Veterinary Clinical Pathology Clinics I (1)

(0-3-1) An introductory course in the clinical application of laboratory testing. An understanding and performance of laboratory procedures including hematology, clinical chemistry, parasitology, serology and urinalysis. Preanesthetic evaluations on clinical cases will be performed, as well as an introduction to new laboratory procedures.

Prerequisite: "C" or better in VET 213, VET 218 and VET 245

Corequisite: VET 259

VET 265 - Veterinary Diagnostic Imaging Clinics I (1)

(0-3-1) The purpose of this course is to apply the principles for diagnostic imaging and imaging procedures and techniques designed to provide diagnostic information in small and large animal radiology and ultrasound in actual clinical cases.

Prerequisite: "C" or better in VET 213, VET 218 and VET 245

Corequisite: VET 260

VET 301 - Emergency and Critical Care (2)

(2-0-2) Clinical instruction in emergency and critical care of large animal, small animal, and laboratory animal patients. Students will receive a wide variety of case-oriented instruction and will be interactive in their diagnostic and therapeutic management, to include documentation of findings and care in problem-oriented medical records and performance of clinical procedures. Students will be exposed to a wide variety of clinical scenarios with instructive pathophysiological learning opportunities. In emergency critical care lectures, students will receive supervised clinical instruction in academic and practical aspects of veterinary emergency medicine and critical care with diagnostic and therapeutic management of a wide variety of clinical scenarios involving medical and surgical management in veterinary emergency and critical care situations.

Prerequisite: "C" or better in VET 213, VET 218, VET 245, and VET 246

VET 357 - Concepts of Large Animal Diseases II (2)

(2-0-2) This advanced course will teach technicians the methodology for studying disease pathophysiology and technical skills for diagnosis and treatment of large animal patients. Students are given advanced health and disease lectures and case scenarios with realistic client historical information. The students are evaluated on their level of knowledge about the disease process, their participation in clinical discussions, and the focus of their methodology for determining appropriate diagnostic testing.

Prerequisite: "C" or better in VET 257, VET 262, VET 264, and VET 265

Corequisite: VET 367

VET 358 - Small Animal Medicine and Surgery II (2)

(2-0-2) A study of clinical procedures, techniques and preventive medicine principles related to assisting the practicing veterinarian with small animal clinic cases, hospital management and client education related to companion animal practice. Some evening and weekend duties are required.

Prerequisite: "C" or better in VET 257, VET 262, VET 264, and VET 265

Corequisite: VET 368

VET 359 - Veterinary Clinical Pathology II (2)

(2-0-2) An advanced course in veterinary clinical pathology, including topics in hematology and parasitology and an introduction to clinical chemistry, serology and urinalysis. The clinical aspects of laboratory exams and the theory behind the tests utilized in a veterinary or biomedical laboratory will be emphasized. Concepts, laboratory tests and application of information from laboratory analysis are discussed in lecture.

Prerequisite: "C" or better in VET 257, VET 262, VET 264, and VET 265

Corequisite: VET 364

VET 363 - Veterinary Preceptorship (1)

(0-40-1) An external practicum in which the student makes the transition from school to the workplace. Emphasis is placed upon proper utilization of the knowledge and techniques learned in the academic program and on continued learning. A weekly journal of activities and case reports are required. Consists of a minimum of four-weeks at 40-hours per week at an approved veterinary facility.

Corequisite: VET 357, VET 358, VET 364, VET 365, VET 366, VET 367, VET 368, and VET 399C

VET 364 - Veterinary Clinical Pathology Clinics II (1)

(0-3-1) An advanced course in the clinical application of laboratory testing. An understanding and performance of laboratory procedures including hematology, clinical chemistry, parasitology, serology and urinalysis.

Preanesthetic evaluations on clinical cases will be performed, as well as an introduction to new laboratory procedures.

Prerequisite: "C" or better in VET 257, VET 262, VET 264, and VET 265

Corequisite: VET 359

VET 365 - Veterinary Dentistry Clinics (1)

(0-3-1) This course will intimate the student to the field of veterinary dentistry from a "hands on" approach. Oral anatomy, terminology, instrumentation, dental prophylaxis and oral radiography concepts covered in VET 360 will be applied. Complete dental prophylaxis procedures and oral radiographic techniques are an integral part of this course. Dental models and live animals will be used during laboratory times.

Prerequisite: "C" or better in VET 257, VET 262, VET 264, and VET 265

Corequisite: VET 366

VET 366 - Veterinary Dentistry (2)

(2-0-2) This course will introduce the student to the field of advanced veterinary dentistry. Oral anatomy, terminology, instrumentation, dental prophylaxis and oral radiography will be discussed. The clinical applications of modern veterinary dental care and the role of the veterinary dental hygienist will be emphasized.

Prerequisite: "C" or better in VET 257, VET 262, VET 264, and VET 265

Corequisite: VET 365

VET 367 - Large Animal Clinics II (1)

(0-3-1) This advanced clinical experience will teach technicians the practical and applied methodology for disease diagnostics and technical skills for treatment of large animal patients. Students are given advanced health and disease clinical sessions with actual patients. The students are evaluated on their level of skill and knowledge about the patient, their participation in clinical discussions and patient care, and the focus of their methodology for determining appropriate diagnostic testing and treatment of the patient.

Prerequisite: "C" or better in VET 257, VET 262, VET 264, and VET 265

Corequisite: VET 357

VET 368 - Small Animal Clinics II (1)

(0-3-1) A study of clinical procedures, techniques and preventive medicine principles related to assisting the practicing veterinarian with small animal clinical cases, hospital management and client education related to companion animal practice. Some evening and weekend duties are required.

Prerequisite: "C" or better in VET 257, VET 262, VET 264, and VET 265

Corequisite: VET 358

VET 370 - Vet Infectious Diseases I (3)

(3-0-3) A study of the clinical aspects of important viral, rickettsial, chlamydial, and mycoplasmal infectious diseases of the dog and cat; with emphasis on clinically relevant aspects of etiology, epidemiology, pathogenesis, clinical findings, diagnosis, pathologic findings, therapy, prevention and public health considerations. The primary objective is to develop a clinical understanding of each disease process and the ability to explain it to a pet owner.

Prerequisite: One of the following: 1. BIOL 210 or 2. VET 357, VET 358, VET 359 VET 364, VET 365, VET 366, VET 367 and VET 368 or 3. Permission of instructor

VET 399C - Veterinary Technician Seminar (1)

(1-0-1) This course is designed to provide students in the Veterinary Technology Program with a culminating experience to discuss and reflect on concepts. The students will also have the opportunity to review for the Veterinary Technician National Board Examination, which is necessary for licensure in the State of Kentucky.

Prerequisite: "C" or better in VET 257, VET 262, VET 264, and VET 265

Corequisite: VET 357, VET 358, VET 359, VET 364, VET 365, VET 366, VET 367, VET 368

VET 401 - Veterinary Practice Management (3)

(3-0-3) An in-depth study of the management skills necessary to operate a clinical or research based veterinary medical facility and personnel. Concepts in human resource management, ethics, financial responsibilities, research and regulatory compliance, client/patient care and office etiquette will be presented.

Prerequisite: One of the following: 1. "C" or better in VET 357, VET 358, VET 359, VET 364, VET 366, VET 367, and VET 368, and completion of a degree from an accredited Vet Tech program. 2. Permission of instructor.

VET 402 - Veterinary Clinical Assistantship (1)

(0-3-1) An advanced study of clinical procedures, techniques and preventative medicine principles related to assisting the practicing veterinarian with small and large animal clinical cases, research projects, hospital management, laboratory supervision of first and second year veterinary technician students and client education related to companion animal practice.

Prerequisite: "C" or better in VET 357, VET 358, VET 359, VET 364, VET 365, VET 366, VET 367, VET 368, and completion of an AVMA accredited Vet Tech program.

VET 403 - Advanced Veterinary Clinical Practicum (12)

(0-40-12) An advanced practical course in the clinical application and professional aspects of veterinary technology in a veterinary health care setting with an emphasis on the role of the student as an advanced level technologist. The student will be required to demonstrate an advanced level of clinical competency in a number and variety of procedures related to veterinary medicine.

Prerequisite: "C" or better in VET 401, VET 402, and VET 499C

VET 405 - Veterinary Professional Leadership (3)

(3-0-3) Veterinary Professional Leadership is a course that will provide veterinary technology students the skills to prepare and manage a professional career as a Licensed Veterinary Technician. The student will develop skills and principles to prepare for the entrance into the profession, self-development and enhancement throughout a career, communication and conflict management unique to the veterinary profession, and career wellness.

Prerequisite: "C" or better in VET 357, VET 358, VET 359, VET 364, VFET 365, VET 366, VET 367, VET 368, and completion of a degree from an AVMA accredited Vet Tech program or permission of instructor.

VET 444 - Animal Health and Therapeutics (3)

(3-0-3) This course is designed to study the mechanisms of disease processes, treatments, and preventative measures for pathologic conditions in livestock and horses, through a problem-based learning format. Students are given weekly case scenarios and are provided with realistic client historical information. As different aspects of the case unfold, students begin to discover learning issues about a particular part of the case. The student is expected to research learning issues and report to the class their findings. Although a diagnosis is made in each case, the students are evaluated on their level of knowledge about the disease process, their participation in clinical discussions, and the focus of their methodology for determining appropriate diagnostic testing. The course will cover diseases from a regional, national, and global aspect, and will also address the bio-security issues necessary to prevent these diseases from entering our country or region. Case studies will also be used to study current therapeutic uses of biologics and medications. Equates with AGR 444.

Prerequisite: AGR 233 or VET 399C or equivalent

VET 499C - Veterinary Technician Seminar (3)

(3-0-3) This course is designed to provide students in the Veterinary Technology Program with a culminating experience to discuss and reflect on concepts that have been learned throughout a veterinary technology program of study. The students will also have the opportunity to present current topics and issues that are relevant to the veterinary profession and animal industry.

Prerequisite: "C" or better in VET 357, VET 358, VET 359, VET 364, VET 365, VET 366, VET 367, VET 368 and completion of a degree from an AVMA accredited Vet Tech program or permission of instructor

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