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## The Goals of a General Education Program

### Fundamental Skills

A well-educated individual is one who can (a) reason and think critically, (b) read and understand college-level material and therefore is capable of acquiring knowledge independently, and (c) communicate effectively in written form.

In a Spring 2017 survey asking Morehead State University faculty to rate the importance of various skills, the skills reasoning and critical thinking, reading comprehension, and written communication were the highest rated skills. These three skills received average ratings of 3.68, 3.66, and 3.67, respectively, where the scale was 1 = not important, 2 = somewhat important, 3 = important, and 4 = very important. Moreover, the ratings for these skills were clearly delineated from the ratings for all other skills (i.e., the three skills were in a class by themselves).

In its Liberal Education and America's Promise (LEAP) framework, the Association of American Colleges and Universities has outlined a number of essential learning outcomes that students should achieve. Among the essential learning outcomes are skills such as critical and creative thinking, written and oral communication, inquiry and analysis, and lifelong learning. At the heart of these skills are reasoning and critical thinking, reading comprehension, and written communication. For example, reasoning/critical thinking and reading comprehension are important for inquiry and analysis and for lifelong learning, and being able to write effectively can benefit oral communication, particularly in formal situations (e.g., speeches). Kentucky is a LEAP state and so it is committed to using LEAP as a guiding framework for student success and general education.

In the Foreword of its 2017-18 report entitled "What Will They Learn?", the American Council of Trustees and Alumni, a non-profit organization committed to academic excellence in higher education, notes the following:

It would be hard to imagine a time when ignorance could be more dangerous. Misinformation can travel across the nation in nanoseconds. Our only defense rests on our capacity to educate citizens to make discerning, thoughtful judgments. That ability comes from the practice of reading closely and analytically and parsing arguments, using the tools of logic and reason that for generations the study of the liberal arts has fostered.

Companies from Silicon Valley to Wall Street need college graduates who are prepared not only for technical tasks, but also for high-level critical thinking and written communication. A recent study by Payscale shows that 60% of managers thought graduating seniors were simply not prepared in critical thinking/problem solving. The survey also found that 44% and 46%, respectively, of managers thought recent college graduates lacked writing proficiency and communication skills. If students are not developing these abilities in college, then what are they learning?

**GOAL 1:** A general education program should develop students' ability to reason and think critically, to read and understand college-level material, and to communicate effectively in written form. The development of these important skills should not be limited to specific courses, but

should take place throughout the general education curriculum. LEAP recommends that intellectual and practical skills be practiced extensively across the curriculum. LEAP also notes that writing extensively across the curriculum is a high-impact educational practice. A high-impact educational practice is a practice that has been shown to correlate positively with educational outcomes in students.

### **Fundamental Knowledge**

A well-educated individual is also one who is familiar with the major areas of study and who understands their importance. These areas are mathematics, the natural sciences, the social and behavioral sciences, and the arts and humanities.

In the Spring 2017 survey, Morehead State University faculty were asked to rate the importance of various knowledge areas. Mathematics, the natural sciences, the social sciences, the humanities, and the arts received average ratings of 3.37, 3.18, 3.07, 3.03, and 2.83, respectively, where the scale was 1 = not important, 2 = somewhat important, 3 = important, and 4 = very important. Thus, faculty considered these areas, perhaps with the exception of the arts, to be important components of a general education program.

LEAP recommends the study of mathematics, the natural sciences, the social sciences, the humanities, and the arts. The Kentucky Council on Postsecondary Education requires the study of mathematics (minimum 3 credit hours), the natural sciences (minimum 3 credit hours), the social and behavioral sciences (minimum 6 credit hours), and the arts and humanities (minimum 6 credit hours).

The report "What Will They Learn?" recommends the study of mathematics, the natural sciences, the social sciences, and the humanities. However, the report argues that the study of the social sciences should be limited to economics and United States government, and the study of the humanities should be limited to literature and United States history. According to the report, literature "is fundamental training for the critical thinking skills that are so important for all careers" (p. 9) and higher educational institutions have a civic duty to ensure that students have a working knowledge of United States history and government. Also, "in an interconnected world of finite resources, understanding the principles that govern the allocation of goods and services—economics—is essential" (p. 10).

Generally, courses should be "big picture" courses. A big picture course is a survey course that focuses on a discipline's (e.g., biology) important concepts and methods and on how these concepts and methods have expanded our understanding of important issues and have helped solve important problems. Only then can students develop a familiarity with the discipline and an understanding of its importance. LEAP recommends that courses focus on big questions, and the "What Will They Learn?" report champions survey courses over narrow courses. For example, the report gives schools credit for United States government or history if

they require a survey course in either U.S. government or history with enough chronological and/or topical breadth to expose students to the sweep of American history and institutions. Neither narrow, niche courses nor courses that focus on only a limited chronological period or a specific state or region count for the requirement. (p. 10)

GOAL 2: A general education program should develop students' familiarity with the major areas of study and students' understanding of the importance of these areas by exposing students to big picture courses in mathematics, the natural sciences, the social and behavioral sciences, and the arts and humanities.

It should be noted that a well-educated individual also has extensive knowledge of at least one domain. That aspect of the individual is developed in the major and not in the general education program.

### **The Human Community**

Finally, a well-educated individual is one who appreciates the global diversity of the human community and who understands the importance of a civil and just society.

In the Spring 2017 survey, Morehead State University faculty were asked to rate the importance of various knowledge areas. Appreciation of cultural differences and appreciation of values and social responsibility received average ratings of 3.06 and 3.18, respectively, where the scale was 1 = not important, 2 = somewhat important, 3 = important, and 4 = very important. Thus, faculty considered these areas to be important components of a general education program. Appreciation of cultural differences was considered to be as important as the social sciences and the humanities, and appreciation of values and social responsibility was considered to be as important as the natural sciences.

LEAP considers intercultural knowledge\competence and ethical reasoning\action to be essential learning outcomes. LEAP also considers diversity\global learning to be a high-impact educational practice. As noted earlier, a high-impact educational practice is a practice that has been shown to correlate positively with educational outcomes in students. LEAP notes that

Many colleges and universities now emphasize courses and programs that help students explore cultures, life experiences, and worldviews different from their own. These studies—which may address US diversity, world cultures, or both—often explore “difficult differences” such as racial, ethnic, and gender inequality, or continuing struggles around the globe for human rights, freedom, and power. (The LEAP Vision For Learning: Outcomes, Practices, Impact, and Employers' Views, 2011, p. 18)

The report "What Will They Learn?" suggests that learning about a foreign culture can best be accomplished by studying and learning that culture's language. The report recommends that students take at least three semesters of a foreign language.

GOAL 3: A general education program should cultivate students' (a) appreciation of global cultures, (b) ability to engage in ethical reasoning, and (c) understanding of the importance of social justice.



## The Structure of a General Education Program

A general education program should be structured in such a way that (a) the program can achieve its goals, (b) the assessment of the program's effectiveness in meeting its goals is not overly burdensome, and (c) the program is coherent and not perceived as an unrelated jumble of courses.

### Size of Knowledge Categories

One impediment to a solid program structure is the large numbers of courses that occupy knowledge categories. When a large number of courses occupy a knowledge category, what one typically gets is an unrelated jumble of courses that do not, as a whole, exemplify the knowledge category. For example, our current general education program lists 27 courses under Social and Behavioral Sciences (I and II combined) and these courses range from AGR 185 (Current Food and Energy Issues) to FIN 160 (Money: A Cultural Exchange) to PSY 154 (Introduction to Psychology). Many of these courses are overly narrow (e.g., Social Dimensions of Technology) and some are arguably not a Social and Behavioral Science. For example, HST 105 (U.S. History Since 1945) appears under Social and Behavioral Sciences, but HST 110 (World History Since 1945) appears under Humanities. When examining the list of 27 courses, what one sees is an unrelated jumble of courses. What one should see under Social and Behavioral Sciences is a small, principled list of courses that, as a whole, exemplify the knowledge category.

Large numbers of courses in knowledge categories also make quality control and assessment of the general education program very difficult. It is easier to monitor six courses in a knowledge category to determine that they are effectively addressing student learner outcomes than it is to monitor 27 courses in a knowledge category.

Many faculty are aware of the problems associated with having large numbers of courses in knowledge categories. In the Spring 2017 survey, 45% of Morehead State University faculty indicated that a knowledge category should have no more than four courses and 31% of faculty indicated that a knowledge category should have 5 to 8 courses. Only 24% of faculty indicated that a knowledge category should have more than eight courses.

The report "What Will They Learn?" is highly critical of the practice of having large numbers of courses in knowledge categories. Here are excerpts from the report.

Many institutions now require only that students satisfy "distribution requirements" by taking any course from an eclectic list of courses, often numbering in the hundreds or even thousands. (p. 5)

When schools replace their core curricula with a "study-what-you-want" philosophy, they undermine the goal of ensuring for their students a coherent education, including subjects students might not have picked themselves. When distribution requirements are too loose, students inevitably gravitate toward an odd list of random, unconnected courses. (p. 6)

Many colleges and universities continue to stress the importance of students building foundational knowledge and skills, but allow those students to satisfy these

requirements with an incoherent curriculum. This is commonly called a “cafeteria-style” curriculum. The following are a few of the more peculiar general education classes we found in our research:

- Rosemont College: “Social Mediation & Dispute Resolution” fulfills the “Problem Solving and Critical Thinking” requirement (the same category for which college-level mathematics courses are also options).
- Gettysburg College: “FYS-149 Atomic Lizards, Robots, Pocket Monsters and Cute Kitties: Japanese Pop Culture Goes Global” fulfills the “Cultural Diversity” requirement.
- Stockton University: “Vampires: History of the Undead” fulfills the “Historical Consciousness” requirement. (p. 21)

**STRUCTURAL PRINCIPLE 1:** Each knowledge category in a general education program should contain no more than eight courses and the courses in a knowledge category should, as a whole, exemplify the knowledge category.

### **Vertical versus Horizontal**

Academic programs are generally perceived as coherent because they have a vertical structure. Foundation courses are taken first because they develop skills and knowledge that will be required in higher-level courses. Also, the curriculum often progresses from courses with broader content to courses with narrower or more specialized content. Thus, academic programs generally have prerequisites and corequisites.

In contrast, most general education programs, including Morehead State University's program, have a horizontal structure where students can take general education courses in any order. As an analogy, imagine playing the piano by pushing keys at random much like a two-year-old child might do. It is not surprising then that students view general education not as a coherent academic program, but rather as a series of unconnected courses they have to take.

When Morehead State University faculty were asked in the Spring 2017 survey if they knew of any institutions with a unique or exemplar general education program, 4 of the 24 respondents indicated Western Kentucky University (which was the most frequently cited institution). Western Kentucky University recently revised its general education program and introduced some vertical structure to the program. The program has three levels. Level 1 consists of foundation courses and students cannot take Level 3 courses until they have completed 21 hours of Level 1 and 2 courses or until they reach their junior year.

**STRUCTURAL PRINCIPLE 2:** A general education program should be structured vertically with foundation courses at the first level and courses with narrower or more specialized content at the highest level. Also, lower-level courses should be prerequisites, or at the very least corequisites, for higher-level courses.

## **Program Length**

The Kentucky Council on Postsecondary Education requires that a general education program be at least 30 credit hours.

In the Spring 2017 survey, 43% of Morehead State University faculty indicated that a general education program should be 30 credit hours or less and 33% of faculty indicated that a program should be 31 to 36 credit hours. Only 24% of faculty indicated that a general education program should be more than 36 credit hours.

Our current general education program is 36 credit hours with 3 of the 36 credit hours being in the major (i.e., the capstone course). None of the remaining courses in the general education program can be applied toward the major because double-dipping is prohibited. Consequently, 33 of the 36 credit hours are outside of the major. This can be problematic for an academic program whose accreditation body requires 90 credit hours or more of coursework beyond the 33 credit hours of general education requirements because it extends the academic program beyond 120 credit hours. The problem has led to the creation of exchange courses where an academic program can substitute some of its courses for general education courses. Because students who take exchange courses do not get the full general education experience, exchange courses should be eliminated. One way to achieve this is to allow double-dipping.

**STRUCTURAL PRINCIPLE 3:** A general education program should not exceed 36 credit hours and should allow double-dipping.

## **A Summary of the Goals and Structural Principles**

**GOAL 1:** A general education program should develop students' ability to reason and think critically, to read and understand college-level material, and to communicate effectively in written form. The development of these important skills should not be limited to specific courses, but should take place throughout the general education curriculum.

**GOAL 2:** A general education program should develop students' familiarity with the major areas of study and students' understanding of the importance of these areas by exposing students to big picture courses in mathematics, the natural sciences, the social and behavioral sciences, and the arts and humanities.

**GOAL 3:** A general education program should cultivate students' (a) appreciation of global cultures, (b) ability to engage in ethical reasoning, and (c) understanding of the importance of social justice.

**STRUCTURAL PRINCIPLE 1:** Each knowledge category in a general education program should contain no more than eight courses and the courses in a knowledge category should, as a whole, exemplify the knowledge category.

**STRUCTURAL PRINCIPLE 2:** A general education program should be structured vertically with foundation courses at the first level and courses with narrower or more specialized content at the

highest level. Also, lower-level courses should be prerequisites, or at the very least corequisites, for higher-level courses.

**STRUCTURAL PRINCIPLE 3:** A general education program should not exceed 36 credit hours and should allow double-dipping.

## **A 30 Credit-Hour General Education Program**

This section unveils a 30 credit-hour general education program that meets the goals and follows the structural principles outlined above. The program is called the LUX program. LUX is a unit of illumination and therefore the program could be viewed as leading undergraduates to enlightenment. LUX could also be viewed as an acronym for Leading Undergraduates to Excellence.

### **Overview of the Program**

The program has a vertical structure. It consists of three levels. Foundation courses appear at Level 1, broad survey courses (i.e., big picture courses) appear at Level 2, and more specialized courses appear at Level 3. The next two pages provide an overview of the program, and subsequent sections provide a detailed description of the three levels.

<b>Level 1 (Foundation – 9 Credit Hours)</b>	
<b>Written Communication I (3 credit hours)</b>	<ul style="list-style-type: none"> <li>• This course will focus on writing effectively for a variety of college-level audiences following the conventions of standard American English.</li> </ul>
<b>Mathematics (3 credit hours)</b>	<ul style="list-style-type: none"> <li>• Students will select one course from this category.</li> <li>• The category will have a maximum of six courses plus the equivalent “enhanced” courses. Each course will expose students to the quantitative reasoning skills necessary for success in their program.</li> </ul>
<b>Oral Communication (3 credit hours)</b>	<ul style="list-style-type: none"> <li>• This course will focus on speaking effectively in a variety of contexts.</li> </ul>

<b>Level 2 (Knowledge – 12 Credit Hours)</b>	
<i>Written Communication I, and Mathematics are corequisites for all Level 2 courses.</i>	
<b>Natural Sciences (6 credit hours)</b>	<ul style="list-style-type: none"> <li>• Students will select two courses with different prefixes from this category.</li> <li>• The category will have a maximum of eight courses. A prefix can occur at most twice in the category.</li> <li>• Each course will belong to one of the following disciplines: astronomy, biology, chemistry, geology, physical geography, physics, environmental science, or behavioral neuroscience.</li> <li>• Each course will be a big picture course.</li> <li>• <u>Each course will have a lab component that involves the analysis of data and the formal reporting of methods and results in written form.</u></li> <li>• <u>Each course will challenge students to reason and think critically.</u></li> </ul>
<b>Social and Behavioral Sciences (3 credit hours)</b>	<ul style="list-style-type: none"> <li>• Students will select one course from this category.</li> <li>• The category will have a maximum of eight courses. A prefix can occur at most twice in the category.</li> <li>• Each course will belong to one of the following disciplines: sociology, psychology, economics, political science, or human geography.</li> <li>• Each course will be a big picture course.</li> <li>• <u>Each course will have a substantive reading component and a nontrivial formal writing component.</u></li> <li>• <u>Each course will challenge students to reason and think critically.</u></li> </ul>
<b>Arts and Humanities (3 credit hours)</b>	<ul style="list-style-type: none"> <li>• The criteria are identical to that for Social and Behavioral Sciences except that each course will belong to one of the following disciplines: literature, history, philosophy, languages, music, theatre, or the visual arts.</li> </ul>

### Level 3 (The Human Community – 9 Credit Hours)

*Prior to taking Level 3 courses, students must complete all Level 1 requirements.*

<b>Written Communication II (3 credit hours)</b>	<ul style="list-style-type: none"> <li>• This course will build upon the writing and rhetorical skills developed in Written Communication I.</li> <li>• The theme of the course will be the human community.</li> <li>• <u>The course will have a substantive reading component and a substantive formal writing component.</u></li> <li>• <u>The course will challenge students to reason and think critically.</u></li> </ul>
<b>Global Cultures (3 credit hours)</b>	<ul style="list-style-type: none"> <li>• Students will select one course from this category</li> <li>• The category will have a maximum of 10 courses—a maximum of five social and behavioral sciences courses and a maximum of five arts and humanities courses. A prefix can occur at most twice in the category.</li> <li>• Each course will examine one or more foreign cultures from a sociological, psychological, economic, political, institutional, or anthropological perspective (for social and behavioral sciences courses) or from a literary, historical, philosophical, or artistic perspective (for arts and humanities courses).</li> <li>• <u>Each course will have a substantive reading component and a substantive formal writing component.</u></li> <li>• <u>Each course will challenge students to reason and think critically.</u></li> </ul>
<b>Ethics and Social Justice (3 credit hours)</b>	<ul style="list-style-type: none"> <li>• Students will select one course from this category. Also, if students select a social and behavioral sciences course (an arts and humanities course) from the Global Cultures category, then they must select an arts and humanities course (a social and behavioral sciences course) from the Ethics and Social Justice category.</li> <li>• The category will have a maximum of 10 courses—a maximum of five social and behavioral sciences courses and a maximum of five arts and humanities courses. A prefix can occur at most twice in the category.</li> <li>• Each course will examine ethics or social justice from a sociological, psychological, economic, political, institutional, or anthropological perspective (for social and behavioral sciences courses) or from a literary, historical, philosophical, or artistic perspective (for arts and humanities courses).</li> <li>• <u>Each course will have a substantive reading component and a substantive formal writing component.</u></li> <li>• <u>Each course will challenge students to reason and think critically.</u></li> </ul>

**GOING ABOVE AND BEYOND:** Students who go beyond the required 30 credit hours by taking an additional six credit hours (three credit hours at Level 2 and three credit hours at Level 3) and who have a minimum grade-point average of 3.0 on general education coursework will be recognized with a certificate or medal of achievement in general education.

## Description of the Three Levels

### Level 1 (Foundation – 9 Credit Hours)

Level 1 has one course in writing, a category of mathematics courses, and one course in oral communication.

#### **Written Communication I (3 credit hours)**

This course will focus on writing effectively for a variety of college-level audiences following the conventions of standard American English.

The principles learned in this course will be useful at the higher levels of the program where every course will have a formal writing component.

The current enrollment cap of 22 students per section is to be maintained for this course.

#### **Mathematics (3 credit hours)**

Students will select one course from the category.

The category will have a maximum of six courses. Because quantitative reasoning is the foundation of many important areas of education, different courses in the mathematics category will expose students to different quantitative reasoning skills necessary for success in different areas of study. The course chosen in this category will reflect, in part, the preferred field of study for the individual student.

The knowledge acquired by students from this category will be useful at the second level of the program where all natural sciences courses will have a data analysis component and where some natural sciences courses and social and behavioral sciences courses might have a quantitative component.

#### **Oral Communication (3 credit hours)**

This course will focus on speaking effectively in a variety of contexts.

Although the course is not foundational with respect to the higher levels of the program, it is included in the program for four reasons. First, LEAP considers oral communication an essential learning outcome. Second, the Kentucky Council on Postsecondary Education requires that students take an oral communication course. Third, when Morehead State University students were asked, in a Spring 2017 survey, *Based on your experience, please identify the most useful skills or courses you acquired through Morehead State University's General Education program*, the most frequent response was oral communication. Finally, the principles learned in the course will be useful for those students who must give speeches or presentations as part of their coursework in their major.

## Level 2 (Knowledge – 12 Credit Hours)

*Written Communication I, and Mathematics are corequisites for all Level 2 courses.*

Level 2 has three categories of courses—Natural Sciences, Social and Behavioral Sciences, and Arts and Humanities.

All courses in Social and Behavioral Sciences and in Arts and Humanities will have a substantive reading component and a nontrivial formal writing component.

A course is considered to have a *substantive reading component* if (a) students read *at least* an average of 15 pages of college-level material per week, (b) students are tested on their comprehension of the reading material, (c) comprehension of the reading material is tested *prior* to the material being discussed in class if the instructor intends to discuss the material in class, and (d) the comprehension tests, as a whole, are worth at least 10% of a student's final grade.

A course is considered to have a *nontrivial formal writing component* if (a) students are given *at least* three different writing assignments, (b) each writing assignment is at least 500 words in length, (c) each writing assignment requires students to revise and resubmit their work based on critical feedback from the instructor, and (d) the writing assignments, as a whole, are worth at least 10% of a student's final grade. The report "What Will They Learn?" notes that "writing for a discipline is acceptable when there are clear provisions for multiple writing assignments, instructor feedback, revision and resubmission of student writing, and attention to the mechanics of formal writing" (p. 9).

### Natural Sciences (6 credit hours)

Students will select two courses with different prefixes (e.g., BIOL and PHYS) from the category.

The category will have a maximum of eight courses. A prefix (e.g., BIOL) can occur at most twice in the category. The courses in the category will exemplify the natural sciences. The report "What Will They Learn?" considers the following disciplines to exemplify the natural sciences: astronomy, biology, chemistry, geology, physical geography, physics, environmental science, and behavioral neuroscience.

Each course in the category will be a big picture course. That is, each course will be a survey course that focuses on its discipline's important concepts and methods and on how these concepts and methods have expanded our understanding of important issues and have helped solve important problems.

Each course in the category will have a lab component that involves the analysis of data and the formal reporting of methods and results in written form. A weekly lab is not required, but there must be at least three different lab sessions (e.g., Over the semester, students will run three experiments. For each experiment, students will collect and analyze data, and produce a two-page report outlining the methods and results of the

experiment). If a physical lab experiment is not feasible, then a virtual lab experiment will suffice. In a virtual lab experiment, students observe an actual lab experiment (e.g., on video) and then are provided with data from the experiment.

Each course in the category will challenge students to reason and think critically (e.g., over the semester, students will be given six reasoning/critical thinking exercises).

### **Social and Behavioral Sciences (3 credit hours)**

Students will select one course from the category.

The category will have a maximum of eight courses. A prefix (e.g., SOC) can occur at most twice in the category. The courses in the category will exemplify the social and behavioral sciences. The following disciplines exemplify the social and behavioral sciences: sociology, psychology, economics, political science, and human geography.

Each course in the category will be a big picture course. That is, each course will be a survey course that focuses on its discipline's important concepts and methods and on how these concepts and methods have expanded our understanding of important issues and have helped solve important problems.

Each course in the category will have a substantive reading component and a nontrivial formal writing component.

Each course in the category will challenge students to reason and think critically (e.g., Over the semester, students will be given six reasoning/critical thinking exercises).

### **Arts and Humanities (3 credit hours)**

Students will select one course from the category.

The category will have a maximum of eight courses. A prefix (e.g., HST) can occur at most twice in the category. The courses in the category will exemplify the arts and humanities. The following disciplines exemplify the arts and humanities: literature, history, philosophy, languages, music, theatre, and the visual arts.

Each course in the category will be a big picture course. That is, each course will focus on important works, concepts, events, or people that have had a significant impact on human societies.

Each course in the category will have a substantive reading component and a nontrivial formal writing component.

Each course in the category will challenge students to reason and think critically (e.g., over the semester, students will be given six reasoning/critical thinking exercises).

To fulfill the criteria of the various categories, instructors may propose new courses or modify existing courses.

Class sizes for Level 2 courses should be sufficiently small to accommodate the nontrivial writing component. A recommended guideline is that the enrollment in any Level 2 course not exceed 40 students. An examination of the Fall 2017 enrollment capacities for class sections revealed that the majority of arts and humanities courses had enrollment capacities between 20 and 40 and that the majority of social and behavioral sciences courses and natural sciences courses had enrollment capacities between 20 and 50. Thus having class sizes that are no greater than 40 is a realistic goal.

### **Level 3 (The Human Community – 9 Credit Hours)**

*Prior to taking Level 3 courses, students must complete all Level 1 requirements.*

Level 3 has one course in writing and two categories of courses—Global Cultures and Ethics/Social Justice.

Each of the two categories will be populated with social and behavioral sciences courses and arts and humanities courses. Thus, each category is divided into two blocks (i.e., Global Cultures—Social and Behavioral Sciences, Global Cultures—Arts and Humanities, Ethics/Social Justice—Social and Behavioral Sciences, and Ethics/Social Justice—Arts and Humanities). If students select a social and behavioral sciences course in one category, then they must select an arts and humanities course in the other category, and vice versa.

Level 2 requires that students complete three credit hours of social and behavioral sciences and three credit hours of arts and humanities. The Kentucky Council on Postsecondary Education requires a minimum of six credit hours of social and behavioral sciences and six credit hours of arts and humanities. Thus, students must take three credit hours of social and behavioral sciences and three credit hours of arts and humanities at Level 3.

All Level 3 courses will have a substantive reading component and a substantive formal writing component.

A course is considered to have a substantive reading component if it meets the four criteria outlined in Level 2.

A course is considered to have a *substantive formal writing component* if (a) students are given *at least* four different writing assignments, (b) each writing assignment is at least 750 words in length, (c) each writing assignment requires students to revise and resubmit their work based on critical feedback from the instructor, and (d) the writing assignments, as a whole, are worth at least 20% of a student's final grade.

#### **Written Communication II (3 credit hours)**

This course will build upon the writing and rhetorical skills developed in Written Communication I. The theme of the course will be the human community.

The course will have a substantive reading component and a substantive formal writing component.

The course will challenge students to reason and think critically (e.g., over the semester, students will be given six reasoning/critical thinking exercises).

### **Global Cultures (3 credit hours)**

Students will select one course from the category.

The category will have a maximum of 10 courses—a maximum of five social and behavioral sciences courses and a maximum of five arts and humanities courses. A prefix (e.g., ART) can occur at most twice in the category.

Each course will examine one or more foreign cultures from a sociological, psychological, economic, political, institutional, or anthropological perspective (for social and behavioral sciences courses) or from a literary, historical, philosophical, or artistic perspective (for arts and humanities courses).

Each course in the category will have a substantive reading component and a substantive formal writing component.

Each course in the category will challenge students to reason and think critically (e.g., over the semester, students will be given six reasoning/critical thinking exercises).

### **Ethics and Social Justice (3 credit hours)**

Students will select one course from the category. Also, if students select a social and behavioral sciences course (an arts and humanities course) from the Global Cultures category, then they must select an arts and humanities course (a social and behavioral sciences course) from the Ethics and Social Justice category.

The category will have a maximum of 10 courses—a maximum of five social and behavioral sciences courses and a maximum of ~~six~~ five arts and humanities courses. A prefix (e.g., PHIL) can occur at most twice in the category.

Each course will examine ethics or social justice from a sociological, psychological, economic, political, institutional, or anthropological perspective (for social and behavioral sciences courses) or from a literary, historical, philosophical, or artistic perspective (for arts and humanities courses). A course may focus on diverse human groups (e.g., racial or gender groups) provided the focus is on social justice with respect to these groups.

Each course in the category will have a substantive reading component and a substantive formal writing component.

Each course in the category will challenge students to reason and think critically (e.g., over the semester, students will be given six reasoning/critical thinking exercises).

To fulfill the criteria of the various categories, instructors may propose new courses or modify existing courses.

Class sizes for Level 3 courses should be sufficiently small to accommodate the substantive writing component. A recommended guideline is that the enrollment in any Level 3 course not exceed 30 students. However, the current enrollment cap of 22 students per section is to be maintained for Writing II. If class sizes for Global Cultures courses or for Ethics and Social Justice courses cannot be limited to 30 or less, then the substantive formal writing component could be reduced to a nontrivial formal writing component.

### **Going Above and Beyond**

Students who go beyond the required 30 credit hours by taking an additional six credit hours (three credit hours at Level 2 and three credit hours at Level 3) and who have a minimum grade-point average of 3.0 on general education coursework will be recognized with a certificate or medal of achievement in general education.

Recognizing students in this manner conveys to students the importance of general education.

## Student Learner Outcomes (SLOs)

There are 10 SLOs.

1. Students read college-level texts for comprehension.
2. Students learn to 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 effectively analyze and solve problems utilizing reasoning and critical thinking skills.
6. Students effectively identify how important works, concepts, events, or people have significantly impacted human societies.
7. Students effectively examine 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 an engaged member of society.
10. Students effectively synthesize the diverse concepts/methods in multiple disciplines to expand our understanding of important issues.

The skills associated with SLOs 1 and 2 are foundational for any General Education program, and as a result will be assessed in two separate courses: once in Level 1 and again in Level 3. The skill associated with SLO 5 addresses critical thinking, which is a cornerstone of the program, and thus will be assessed in every course. The remaining SLOs will each be assessed in one course as shown in the table below. The method of assessment would be a (perhaps) modified version of the AAC&U Value Rubrics.

## Student Learner Outcomes Distribution

Course	SLO Assessed
Written Communication I	1. Students read college-level texts for comprehension. 2. Students learn to write effectively for a targeted college-level audience using the conventions of standard American English. 5. Students effectively analyze and solve problems utilizing reasoning and critical thinking skills.
Mathematics	4. Students effectively apply quantitative reasoning in a variety of contexts. 5. Students effectively analyze and solve problems utilizing reasoning and critical thinking skills.
Oral Communication	3. Students speak effectively in a variety of different contexts. 5. Students effectively analyze and solve problems utilizing reasoning and critical thinking skills.
Natural Sciences	5. Students effectively analyze and solve problems utilizing reasoning and critical thinking skills. 8. Students effectively study the natural world through the use of scientific principles.
Social and Behavioral Sciences	5. Students effectively analyze and solve problems utilizing reasoning and critical thinking skills. 10. Students effectively synthesize the diverse concepts/methods in multiple disciplines to expand our understanding of important issues.
Arts and Humanities	5. Students effectively analyze and solve problems utilizing reasoning and critical thinking skills. 6. Students effectively identify how important works, concepts, events, or people have significantly impacted human societies.
Written Communication II	1. Students read college-level texts for comprehension. 2. Students learn to write effectively for a targeted college-level audience using the conventions of standard American English. 5. Students effectively analyze and solve problems utilizing reasoning and critical thinking skills.
Global Cultures	5. Students effectively analyze dilemmas and solve problems as a result of reasoning thinking critically. 7. Students effectively examine human cultures, past or present, from a variety of perspectives.
Ethics and Social Justice	5. Students effectively analyze dilemmas and solve problems as a result of reasoning thinking critically. 9. Students effectively examine the complex ethical/social responsibilities of an engaged member of society.

## Assessment Schedule

Each Student Learning Outcome will go through a four-year cycle of assessment. The four phases for each SLO are as follows:

**Planning:** During this year, the faculty of the courses where the SLOs will be assessed devise assignments and tools that will be used to evaluate students using the approved rubrics.

**Assessing:** During this year, the SLOs will be assessed using the approved rubric.

**Reporting/Improving:** During this year, the results of the assessed SLOs will be reported to the Director of University of Assessment and Testing.

**Implementing:** During this year, the rubric used to assess the SLOs will be modified and approved by the GEC based on the assessment results.

The initial schedule for SLO assessment can be modeled by the following table:

Fall 20-Spring 21	Fall 21-Spring 22	Fall 22-Spring 23	Fall 23-Spring 24
<b>Planning</b> <sup>†</sup> SLOs: 3 and 4	<b>Planning</b> SLOs: 9 and 10	<b>Planning</b> SLOs: 6, 7, and 8	<b>Planning</b> SLOs: 1, 2, and 5
<b>Assessing</b> <sup>‡</sup> SLOs: 1, 2, and 5	<b>Assessing</b> SLOs: 3 and 4	<b>Assessing</b> SLOs: 9 and 10	<b>Assessing</b> SLOs: 6, 7, and 8
<b>Reporting/Improving</b> <sup>*</sup> SLOs: 6, 7, and 8	<b>Reporting/Improving</b> SLOs: 1, 2, and 5	<b>Reporting/Improving</b> SLOs: 3 and 4	<b>Reporting/Improving</b> SLOs: 9 and 10
<b>Implementing</b> SLOs: 9 and 10	<b>Implementing</b> SLOs: 6, 7, and 8	<b>Implementing</b> SLOs: 1, 2, and 5	<b>Implementing</b> SLOs: 3 and 4

<sup>†</sup>Fall 19-Spring 20: Implementing for SLOs 3 and 4 by GEC.

<sup>‡</sup>Fall 18-Spring 19: Implementing for SLOs 1, 2, and 5 by GEC. Fall 19-Spring 20: Planning for SLOs 1, 2, and 5 by faculty.

<sup>\*</sup>This step will not be done in this year since no assessment will have been done.

## General Education Assessment Sampling

Best practices indicate that 10% sampling is acceptable to assess student learning outcome attainment in each general education course. Thus, in order to ensure adequate sampling across the various categories within MSUs general education curriculum, 10% of students (or 10 students, whichever is greater) from each general education course will be sampled.

The specific sampling technique that will be used is cluster sampling, i.e. a randomly selected group (in this case, sections of general education courses) where assignments for each student in the sections chosen would be assessed. Cluster sampling is used in general education assessment for convenience, so that assessment can be contained in specific sections of the course, rather than randomly sampling students from all sections of the course.

To ensure that our sample includes a good representation of sections with different course delivery methods (on campus, online, Eagle Scholars), the following framework will be utilized to ensure sampling consistency:

### Assessment when SLO is assessed in only 1 course

If the SLO is being assessed in only one course (i.e. Writing I, Writing II, Reasoning and Critical Thinking) a sufficient number of sections will be chosen from each delivery method to ensure 10% of students or 10 students, whichever is greater, from that course are assessed.

### Assessment when SLO is assessed in multiple courses

If the SLO is being assessed in multiple courses, a sufficient number of sections will be chosen from each delivery method to ensure 10% of students or 10 students, whichever is greater, from each course are assessed.

### Sampling Selection

Sections for assessment will be chosen by a subcommittee of the General Education Council at the beginning of the semester for which assessment is to take place and instructors will be notified in ample time to complete the assessment. The Director of University Assessment & Testing will be part of the subcommittee.

Sections for assessment will be sampled in a manner that ensures diversity when particular SLOs are assessed. The previous assessment sample will be reviewed and care will be taken to ensure different instructors' sections are chosen for assessment.

### Students enrolled in multiple general education courses simultaneously

It is likely that students will be enrolled in multiple general education courses simultaneously, therefore the possibility of the same student being assessed in multiple courses exists. This will not affect the validity of the sampling due to the different types of assessment utilized in different courses.

## **Double-Dipping**

An academic program may choose to apply general education courses toward its major. There are no limits on the number of general education courses that can be applied toward the major, eliminating the need for exchange courses.

It is important to note that courses must satisfy certain criteria to be included in the general education program and that these criteria will not be loosened to accommodate double-dipping.

## Conclusion

In the Spring 2017 survey, 50% of Morehead State University faculty indicated that Morehead State University's current general education program requires some revision and 46% of faculty indicated that the program requires considerable revision or an entirely different approach. Also, when asked whether Morehead State University's general education program is a high-quality program, only 35% of faculty felt the program was of high quality. Thirty-nine percent of faculty felt the program was not of high quality and 26% of faculty were not sure of the program's quality.

The LUX program is a substantive, but reasonable, revision of Morehead State University's current general education program. The LUX program is a high-quality, academically-coherent program whose development was informed by the Association of American Colleges and Universities' LEAP framework, the American Council of Trustees and Alumni's report "What Will They Learn", the Kentucky Council on Postsecondary Education's general education policy, and Morehead State University faculty responses to the Spring 2017 survey. The success of the LUX program will ultimately depend on those overseeing the program and, especially, on the faculty teaching in the program.