

# R470 Appendix, Essential Learning Outcomes<sup>1</sup>

## 1. Core General Education Areas

- 1.1 *Written Communication*: Upon successful completion of the General Education Written Communication requirement, students will be able to:
- 1.1.1 *Sources and Evidence*: Locate, evaluate, and integrate credible and relevant sources to achieve various writing purposes;
  - 1.1.2 *Genre Awareness*: Demonstrate critical and conceptual awareness of genre in reading and writing—including organization, content, presentation, formatting, and stylistic choices;
  - 1.1.3 *Context and Purpose*: Analyze rhetorical situations and adapt to the audience, purpose, modalities, and the circumstances surrounding a range of reading and writing tasks;
  - 1.1.4 *Language Awareness and Usage*: Recognize and make intentional, critical, and contextually-informed language choices across a range of rhetorical contexts/situations; and
  - 1.1.5 *Recursive Writing Processes*: Develop flexible, iterative, and reflective processes for invention, drafting, workshopping, and revision.
  - 1.1.6 *This requirement can be fulfilled by completion of both ENGL 1010 and either ENGL 2010 or ENGL 2020, or other institutionally approved courses.*
- 1.2 **Quantitative Literacy**: Upon successful completion of the General Education Quantitative Literacy requirement, students will be able to:
- 1.2.1 *Communicate*: Use correct terminology and proper notation to explain quantitative or mathematical relationships (equations, graphs, diagrams, tables, data) and to support an argument, assertion, or purpose using quantitative or mathematical evidence;
  - 1.2.2 *Mathematization*: Convert quantitative or mathematical information into appropriate mathematical representations and/or models such as equations, graphs, diagrams, or tables, including making and evaluating important assumptions as needed;
  - 1.2.3 *Calculation*: Use algebraic skills and techniques to solve problems, including the ability to identify and correct errors in calculations and understanding the role and proper use of technology in assisting with calculations;
  - 1.2.4 *Analysis*: Draw appropriate conclusions through quantitative or mathematical analysis of data or models, including understanding and evaluating important assumptions in order to recognize the limits of the analysis; and

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<sup>1</sup> Adopted December 1, 2023; amended November 21, 2024.

- 1.2.5 *Application / Creation*: Solve concrete and abstract problems across multiple disciplines.
- 1.2.6 *This requirement can be fulfilled by completion of MATH 1030, MATH or STAT 1040, MATH 1050, or another institutionally approved course.*

1.3 **American Institutions**: Upon successful completion of the General Education American Institutions requirement, students will be able to:

- 1.3.1 *Synthesize*: Analyze, contextualize, and interpret primary and secondary source documents to understand the history, principles, form of government, and economic system of the United States;
- 1.3.2 *Sources and Evidence*: Locate, evaluate, and use historically, politically, and economically relevant information and data to develop and enhance information literacy and research skills;
- 1.3.3 *Communicate*: Communicate effectively about the history, principles, form of government, multicultural populations, and economic system of the United States;
- 1.3.4 *Examine*: Engage diverse viewpoints that contribute to a constructive dialogue about the history, principles, form of government, and economic system of the United States; and
- 1.3.5 *Apply*: Apply historical, political, and economic perspectives and methods as appropriate to address big questions or threshold concepts pertaining to the history, political system, and economic system of the United States.
- 1.3.6 *This requirement can be fulfilled by completion of ECON 1740, HIST 1700, HIST 2700 & HIST 2710, POLS 1100, or another institutionally approved course.*

## 2. General Education Breadth Areas

2.1 *Arts*: Upon successful completion of the General Education Arts requirement, students will be able to:

- 2.1.1 *Understand*: Explain the creative artistic process as an iterative and recursive practice culminating in an expression of human experience and emotion through a medium;
- 2.1.2 *Appreciate*: Apply artistic concepts and ideas drawn from traditions of artistic creation and theory to better engage with, analyze and understand a creative work;
- 2.1.3 *Connect*: Examine connections between art and society and articulate how the arts are a historical and cultural phenomenon.

2.2 *Humanities*: Upon successful completion of the General Education Humanities requirement, students will be able to:

- 2.2.1 *Examine*: Examine how humanities artifacts (such as oral narratives, literature, philosophy, media, and artworks) express the human condition;
- 2.2.2 *Explain*: Explain how humanities artifacts take on meaning within networks or systems (such as languages, cultures, values, and worldviews) that account for the complexities and uncertainties of the human condition;

- 2.2.3 *Analyze*: Analyze humanities artifacts according to humanities methodologies, such as a close analysis, questioning, reasoning, interpretation, and critical thinking;
  - 2.2.4 *Compare and Contrast*: Compare and contrast diverse humanistic perspectives across cultures, communities, and/or time periods to explain how people make meaning of their lives; and
  - 2.2.5 *Apply*: Using humanities perspectives, reflect on big questions related to aesthetics, values, meaning, and ethics and how those apply to their own lives.
- 2.3 *Life Sciences*: Upon successful completion of the General Education Life Sciences requirement, students will be able to:
- 2.3.1 *Apply Scientific Methods*: Describe and apply approaches to scientific discovery and interpretation of experimental data;
  - 2.3.2 *Understand*: Demonstrate understanding of matter, energy, and their influence on biological systems;
  - 2.3.3 *Apply Knowledge*: Describe and apply evolutionary concepts in terms of inheritance, adaptation, and diversity of life;
  - 2.3.4 *Explain*: Explain the mechanisms of information storage, expression, and exchange in living organisms or eco-systems; and
  - 2.3.5 *Reflect*: Reflect on the relevance of life sciences in a broader context.
- 2.4 *Physical Sciences*: Upon successful completion of the General Education Physical Sciences requirement, students will be able to:
- 2.4.1 *Explain scientific methods*: Explain science as a process and as a way of understanding the physical world;
  - 2.4.2 *Understand*: Demonstrate understanding of matter, energy, and their influence on physical systems;
  - 2.4.3 *Evaluate*: Evaluate the credibility of various sources of information about science-related issues; and
  - 2.4.4 *Apply*: Describe how the Physical Sciences utilize their foundational principles to confront and solve pressing local and global challenges, shaping historical, ethical, or social landscapes in the process.
- 2.5 *Social and Behavioral Sciences*: Upon successful completion of the General Education Social and Behavioral Sciences requirement, students will be able to:
- 2.5.1 *Examine*: Examine institutions and human behavior through social and behavioral concepts, methods, or theories;
  - 2.5.2 *Analyze*: Identify diverse perspectives to explore and examine social and behavioral phenomena; and
  - 2.5.3 *Apply*: Apply discipline-relevant and scientific theories and methods to make inferences

about or applications to social and behavioral phenomena at personal, institutional, or cultural levels.