

General Education Core Course List

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Social Science

*[AMH X010](#) – Introductory Survey to 1877

[AMH X020](#) – Introductory Survey Since 1877

[ANT X000](#) – Introduction to Anthropology

[ECO X013](#) – Principles of Macroeconomics

[POS X041](#) – American Government

[PSY X012](#) – Introduction to Psychology

[SYG X000](#) – Principles of Sociology

*Proposed course recommendation for addition to list

Communication

ENC X101 – English Composition

This course introduces students to rhetorical concepts and audience-centered approaches to writing including composing processes, language conventions and style, and critical analysis and engagement with written texts and other forms of communication.

Student Learning Outcomes:

- Students will apply rhetorical knowledge to communicate for a range of audiences and purposes.
- Students will employ critical thinking to analyze forms of communication.
- Students will engage in writing processes that involve drafting, revising, and reflecting.

Humanities

ARH X000 – Art Appreciation

In this course, students will develop the ability to think critically about human culture and be provided with the tools to understand, analyze, and discuss works of visual art and material culture.

Student Learning Outcomes:

- Students will identify and describe terms, concepts, and methods used in the discipline of art history.
- Students will apply terms, concepts, and methods used in the discipline of art history to works of visual art and material culture.
- Students will identify and describe works of visual art and material culture in the works' cultural context, including works from or inspired by the Western canon and other cultural traditions.
- Students will analyze works of visual art and material culture in the works' cultural context, including works from or inspired by the Western Canon and other cultural traditions.
- Students will generate an analytical response to works of visual art and material culture in the works' cultural context.

HUM X020 – Introduction to Humanities

In this course, students will learn about the creative ideas and accomplishments of various cultures in various fields of humanities that may include art, architecture, drama, history, music, literature, philosophy, and religion. The course will include cultural expressions from the Western canon and may also include expressions from around the globe.

Student Learning Outcomes:

- Students will demonstrate knowledge of arts and ideas and synthesize information from various sources.
- Students will analyze and interpret selected expressions of arts and ideas.
- Students will compare and contrast selected expressions of arts and ideas.
- Students will identify contextual influences on the development of interdisciplinary arts and ideas.

LIT X000 – Introduction to Literature

In this course, students will be assigned readings representative of a broad range of literary genres and cultures. These readings will cover a variety of literary movements and historical eras. The readings will include, but are not limited to, selections from the Western canon. Written analysis of literary works may be required. Students will be provided with opportunities to practice critical interpretation.

Student Learning Outcomes:

- Students will identify a variety of literary movements, historical eras, and/or cultural contexts.
- Students will demonstrate critical thinking and analytical skills.

MUL X010 – Music Literature/Music Appreciation

In this course, students will survey the history of classical music from Antiquity to the modern period, focusing on Western music. The curriculum may also integrate a variety of popular and global styles where appropriate.

Student Learning Outcomes:

- Students will discuss and analyze music using terminology appropriate for the course.
- Students will demonstrate fundamental knowledge of the works of significant composers.
- Students will identify connections between music and the other arts.
- Students will identify historical styles and periods based on instruments and performance practices utilized.

PHI X010 – Introduction to Philosophy

In this course, students will be introduced to the nature of philosophy, philosophical thinking, major intellectual movements in the history of philosophy, including topics from the western philosophical tradition, and various problems in philosophy. Students will strengthen their intellectual skills, become more effective learners, and develop broad foundational knowledge.

Student Learning Outcomes:

- Students will develop critical thinking skills.
- Students will demonstrate an understanding of classical western philosophical views.
- Students will analyze, explain, and evaluate foundational concepts of epistemology, metaphysics, and ethics.

THE X000 – Theater Appreciation

In this course, students will explore dramatic structure, techniques, and various organizational elements. The course provides an introduction to theatre as a collaborative art form through the critical analysis of its historical context, production, theory, and connections to theatrical literature, including the Western canon.

Student Learning Outcomes:

- Students will identify the basic principles of theatrical performance, design, technology, organization, and management.
- Students will assess the social significance and the human condition as expressed through the performing arts.
- Students will explore and interpret works of art utilizing creative and critical thinking skills.
- Students will demonstrate college-level writing.
- Students will define, compare and contrast theater as both an expressive art form and a commercial industry.

Mathematics

MAC X105 – College Algebra

In this course, students will develop problem solving skills, critical thinking, computational proficiency, and contextual fluency through the study of equations, functions, and their graphs. Emphasis will be placed on quadratic, exponential, and logarithmic functions. Topics will include solving equations and inequalities, definition and properties of a function, domain and range, transformations of graphs, operations on functions, composite and inverse functions, basic polynomial and rational functions, exponential and logarithmic functions, and applications.

Student Learning Outcomes:

- Students will solve an equation or an inequality using an appropriate technique.
- Students will define and describe functions, their properties, and graphs.
- Students will manipulate functions to simplify expressions and find new functions.

- Students will use transformations to write an equation for a function and to graph a function.
- Students will model and solve real world problems using functions.

MAC X311 – Calculus I

In this course, students will develop problem solving skills, critical thinking, computational proficiency, and contextual fluency through the study of limits, derivatives, and definite and indefinite integrals of functions of one variable, including algebraic, exponential, logarithmic, and trigonometric functions, and applications. Topics will include limits, continuity, differentiation and rates of change, optimization, curve sketching, and introduction to integration and area.

Student Learning Outcomes:

- Students will calculate a limit, derivative, or integral using appropriate techniques.
- Students will determine the continuity and differentiability of a function.
- Students will use limits and derivatives to analyze relationships between the equation of a function and its graph.
- Students will apply differentiation techniques to model and solve real world problems.
- Students will use integrals and the Fundamental Theorem of Calculus to analyze the relationship between the integral of a function and the related area.

MGF X130 – Mathematical Thinking

In this course, students will utilize multiple means of problem solving through student-centered mathematical exploration. The course is designed to teach students to think more effectively and vastly increase their problem-solving ability through practical application and divergent thinking. This course is appropriate for students in a wide range of disciplines/programs.

Student Learning Outcomes:

- Students will determine efficient means of solving a problem through investigation of multiple mathematical models.
- Students will apply logic in contextual situations to formulate and determine the validity of logical statements using a variety of methods.
- Students will apply mathematical concepts visually and contextually to represent, interpret and reason about geometric figures.
- Students will recognize the characteristics of numbers and utilize numbers along with their operations appropriately in context.
- Students will analyze and interpret representations of data to draw reasonable conclusions.

STA X023 – Statistical Methods

In this course students will utilize descriptive and inferential statistical methods in contextual situations, using technology as appropriate. The course is designed to increase problem-solving abilities and data interpretation through practical applications of statistical concepts. This course is appropriate for students in a wide range of disciplines and programs.

Student Learning Outcomes:

- Students will visualize and summarize data using descriptive statistics.
- Students will apply basic probability concepts to draw reasonable conclusions.
- Students will employ concepts of random variables, sampling distributions, and central limit theorem to analyze and interpret representations of data.
- Students will choose an appropriate method of inferential statistics, including confidence intervals and hypothesis testing, to make decisions about a population based on sample data.
- Students will model linear relationships between quantitative variables using correlation and linear regression.

Natural Science

AST X002 – Descriptive Astronomy

This course provides a comprehensive look at modern astronomy, emphasizing the use of the scientific method and the application of physical laws to understand the Universe including Earth and its environment. Throughout this course, students will develop the ability to discern scientific knowledge from non-scientific claims by using critical thinking.

Student Learning Outcomes:

- Students will define terms used to measure and describe the universe.
- Students will explain the processes involved in the formation and evolution of celestial bodies over astronomical time according to different models and theories.
- Students will describe how scientific theories evolve in response to new observations and critically evaluate their impact on society.
- Students will formulate empirically testable hypotheses derived from the study of physical processes and phenomena.
- Students will apply logical reasoning skills through scientific criticism and argument to separate science from non-science.
- Students will gather and analyze astronomical data and communicate results in graphic and written forms.

BSC X005 – General Biology

This course applies the scientific method to critically examine and explain the natural world including but not limited to cells, organisms, genetics, evolution, ecology, and behavior.

Student Learning Outcomes:

- Students will evaluate data regarding validity.
- Students will read and interpret a variety of scientific data.
- Students will describe the natural world.
- Students will articulate and practice the scientific method.

BSC X010 – General Biology I

In this course students will apply the scientific method to critically examine and explain the natural world. This course will cover molecular biology, cellular biology, genetics, metabolism, and replication.

Student Learning Outcomes:

- Students will demonstrate scientific literacy by articulating and practicing the scientific method.
- Students will evaluate data regarding validity.
- Students will read and interpret a variety of scientific data.
- Students will identify major macromolecules and state their importance to living organisms.
- Students will explain metabolism.
- Students will compare and contrast prokaryotic and eukaryotic structures and processes of cell division and replication.
- Students will explain gene expression.
- Students will solve problems in transmission genetics.

BSC X085 – Anatomy and Physiology I

This course is the first part of a two-semester sequence in which students examine human anatomy and physiology through a systems approach based on the interaction between form and function, from the microscopic components of cells and tissues to the organismal level. Emphasis is placed on histology and the integumentary, skeletal, muscular, and nervous systems.

Student Learning Outcomes:

- Students will identify cell structures and describe their functions.
- Students will distinguish tissues by structure, location in the body, and contrast their normal physiology.
- Students will demonstrate an understanding of anatomical structure, organization of the body, cavities, planes, and directional terms.
- Students will identify and describe structures of integumentary, skeletal, muscular, and nervous systems.
- Students will interpret the functions of the integumentary, skeletal, muscular, and nervous systems.
- Students will explain how the components of the human body maintain homeostasis.
- Students will analyze and interpret physiological data.

CHM X020 – General Chemistry for Liberal Studies

This course provides students with an introduction to chemical principles and applications for the non-science major. Students will engage in problem solving and critical thinking while applying chemical concepts. Topics will include the scientific method of problem solving, classification of matter, atomic theory, the periodic table, gases, chemical reactions, energy, and chemical bonds.

Student Learning Outcomes:

- 1. Students will be able to distinguish between physical and chemical properties and changes.
- 2. Students will recognize components of gaseous chemistry.
- 3. Students will recognize components of aqueous chemistry including properties of water, solutions, and acids and bases.
- 4. Students will correlate the design of the periodic table to periodic trends and physical and chemical properties elements.
- 5. Students will write and interpret chemical formula and write balance chemical equations.

CHM X045 – General Chemistry I

This course is designed for students pursuing careers in the sciences or who need a more rigorous presentation of chemical concepts than is offered in an introductory course. Students will engage in problem solving and critical thinking while applying chemical concepts. Topics will include the principles of chemistry including atomic theory, electronic and molecular structure, measurement, stoichiometry, bonding, periodicity, thermochemistry, nomenclature, solutions, and the properties of gases.

Student Learning Outcomes:

- Students will apply the law of conservation of matter and energy.
- Students will implement rules of significant numbers to all measurements.
- Students will explain the fundamental properties of matter including but not limited to atomic and electronic structure, and periodicity.
- Students will apply IUPAC rules of nomenclature.
- Students will predict molecular geometry and properties from bonding theories
- Students will predict and explain the products of chemical reactions (e.g., acid-base, oxidation-reduction, precipitation, dissociation).

ESC X000 – Introduction to Earth Science

Using the scientific method, critical thinking skills, data analysis, this course will examine the fundamental processes of the Earth system, composed of an atmosphere, hydrosphere, lithosphere, biosphere, and exosphere, through time. The course will also explore interactions between these spheres, including critical analysis of scientific theories and emphasize Earth's connections with humans.

Student Learning Outcomes:

- Students will use critical thinking to recognize the rigorous standards of scientific theories.

- Students will analyze and synthesize Earth science data to draw scientifically valid conclusions.
- Students will recognize the different time scales associated with different Earth processes.
- Students will effectively communicate the importance of the interactions between humans and the Earth's spheres.
- Students will apply their understanding of these Earth science principles to complex global and local issues.

EVR X001 - Introduction to Environmental Science

This course is a survey of basic chemical, biological, and physical principles of environmental science and their applications to environmental issues. This course is appropriate for students in a wide range of disciplines or programs.

Student Learning Outcomes:

- Students will apply critical thinking to analysis and interpretation of environmental information and model output.
- Students will apply the scientific method to explain natural experiences and phenomena.
- Students will explain the basic chemical, biological, and physical principles of environmental science.
- Students will use empirical evidence to describe the historical and modern context of environmental problems and their solutions.

GLY X001 - Introduction to Geology

Using the scientific method, critical thinking skills, data analysis, this course will examine the fundamental processes of the Earth system, composed of an atmosphere, hydrosphere, cryosphere, lithosphere, biosphere, and exosphere through time. The course will also explore interactions between these spheres, including critical analysis of scientific theories and emphasize lithospheric connections with humanity.

Student Learning Outcomes:

- Students will use critical thinking to recognize the rigorous standards of scientific theories.
- Students will analyze and synthesize geoscience data to draw scientifically valid conclusions.
- Students will recognize the different time scales associated with different geologic processes.
- Students will effectively communicate the importance of the interactions between humans and Earth's spheres.
- Students will apply their understanding of these geologic principles to complex issues.

OCE X001 – Introduction to Oceanography

Using the scientific method, critical thinking skills, data analysis, this course will examine the fundamental processes of the ocean system, composed of an atmosphere, hydrosphere, lithosphere, and biosphere, through time. The course will also explore interactions between these spheres, including critical analysis of scientific theories and emphasize oceanic connections with humanity.

Student Learning Outcomes:

- Students will use critical thinking to recognize the rigorous standards of scientific theories.
- Students will analyze and synthesize oceanographic data to draw scientifically valid conclusions.
- Students will recognize the different time scales associated with different ocean processes.
- Students will effectively communicate the importance of the interactions between humans and the ocean realm.
- Students will apply their understanding of these oceanographic principles to various marine issues.

PHY X020 – Fundamentals of Physics

This course offers a comprehensive survey of physics, covering a wide range of topics including motion, Newton's laws, energy, sound, heat, electricity, magnetism, and optics. Emphasizing a conceptual understanding of physics, the course integrates critical thinking skills and real-world applications.

Student Learning Outcomes:

- Students will critically evaluate everyday phenomena using the scientific method.
- Students will explain the basis of physical principles (such as conservation laws) and how they apply to everyday phenomena.
- Students will interpret information conveyed in diagrams and graphs.
- Students will perform simple calculations relevant to real world problems.

PHY X048 – General Physics with Calculus I

This calculus-based course serves as the first in a two-part series, covering topics like kinematics, dynamics, energy, momentum, rotational motion, fluid dynamics, oscillatory motion, and waves. Designed for science and engineering majors, the course integrates critical thinking, analytical skills, and real-world applications.

Student Learning Outcomes:

- Students will solve analytical problems describing different types of motion, including translational, rotational, and simple harmonic motion.
- Students will apply Newton's laws, and conservation laws to solve analytical problems of mechanics.
- Students will identify and analyze relevant information presented in various formats such as graphs, tables, diagrams, and/or mathematical formulations.
- Students will solve real world problems using critical thinking skills and knowledge developed from this course.

PHY X053 - General Physics I

This course is the first in a two-part series intended for non-physics majors, offering an algebra and trigonometry approach to topics such as kinematics, dynamics, energy, momentum, rotational motion, fluid dynamics, oscillatory motion, and waves. The course fosters analytical and critical thinking skills to promote a scientific understanding of the real world.

Student Learning Outcomes:

- Students will solve analytical problems describing different types of motion, including translational, rotational, and simple harmonic motion using algebra and trigonometry.
- Students will apply Newton's laws, and conservation laws by using algebra and trigonometry to solve analytical problems of mechanics.
- Students will identify and analyze relevant information presented in various formats such as graphs, tables, diagrams, and/or mathematical formulations.
- Students will solve real world problems using critical thinking skills and knowledge developed from this course.

Social Science

AMH X010 – Introductory Survey to 1877

In this course students will examine United States history from before European contact to 1877. Topics will include but are not limited to Indigenous peoples, the European background, the Colonial Period, the American Revolution, the Articles of Confederation, the Constitution, issues within the new republic, sectionalism, manifest destiny, slavery, the American Civil War, and Reconstruction.

Student Learning Outcomes:

- Students will describe the factual details of the substantive historical episodes under study.
- Students will identify and analyze foundational developments that shaped American history from before European contact to 1877 using critical thinking skills.
- Students will demonstrate an understanding of the primary ideas, values, and perceptions that have shaped United States history.
- Students will demonstrate competency in civic literacy.

AMH X020 – Introductory Survey Since 1877

In this course, students will trace the history of the United States from the end of the Reconstruction Era to the contemporary era. Topics will include but are not limited to the rise of industrialization, the United States' emergence as an actor on the world stage, constitutional amendments and their impact, the Progressive Era, World War I, the Great Depression and New Deal, World War II, issues of civil and minority rights, the Cold War, and the United States since 1989.

Student Learning Outcomes:

- Students will describe the factual details of the substantive historical episodes under study.
- Students will identify and analyze foundational developments that shaped American history since 1877 using critical thinking skills.
- Students will demonstrate an understanding of the primary ideas, values, and perceptions that have shaped American history.
- Students will demonstrate competency in civic literacy.

ANT X000 – Introduction to Anthropology

In this course, students will learn the foundations of anthropology as the study of human variation in its biological, social, and cultural dimensions. Students will learn about anthropological concepts, principles, and methodologies to understand and explore past and present human behavior. They will apply the anthropological approach to analyze issues pertaining to past and contemporary cultures, and develop intellectual skills and habits to understand behavioral, social and cultural issues from multiple disciplinary perspectives.

Student Learning Outcomes:

- Students will explain scientific approaches to the study of human variation and human origins, including primatology, extinct and extant human cultures, language, and ethnicity.
- Students will explain the origins of anthropology as a foundation discipline in the social sciences that examines the nature and definition of culture.
- Students will apply anthropological concepts, principles, and methods to the scientific study of past and present human behavior.
- Students will explain how anthropology incorporates multidisciplinary knowledge and perspectives.
- Students will describe anthropological contributions to contemporary issues.

ECO X013 – Principles of Macroeconomics

In this course, students will learn the foundations of macroeconomics as the branch of economics concerned with how decision-making, in an environment of scarcity, maps onto the aggregate economy. Students will examine theories and evidence related the following core set of topics: national income determination, money, monetary and fiscal policy, macroeconomic conditions, international trade and the balance of payments, and economic growth and development.

Student Learning Outcomes:

- Students will recognize that all decisions happen in an environment of scarcity.
- Students will examine theories and evidence regarding how changes in aggregate measurements are related to economic performance.
- Students will recognize the relationships between the components of the national income accounts.
- Students will analyze theory and evidence regarding fiscal and monetary policies and how they affect the economy.
- Students will identify theories of long-term economic growth and examine evidence for those theories.

POS X041 – American Government

In this course, students will investigate how the national government is structured and how the American constitutional republic operates. It covers the philosophical and historical foundations of American government, including but not limited to the Declaration of Independence, the United States constitution and all its amendments, and The Federalist Papers. The course examines the branches of government and the government's laws, policies, and programs. It also examines the ways in which citizens participate in their government and ways their government responds to citizens.

Student Learning Outcomes:

- Students will demonstrate an understanding of the basic principles and practices of America's constitutional republic.
- Students will demonstrate knowledge of the nation's founding documents, including the Declaration of Independence, the U.S. Constitution and its amendments, and The Federalist Papers.
- Students will demonstrate knowledge of landmark U.S. Supreme Court cases, landmark legislation and landmark executive actions.
- Students will demonstrate knowledge of the history and development of the American federal government and its impact on law and society.
- Students will demonstrate an ability to apply course material to contemporary political issues and debates.
- Students will demonstrate the ability to engage in discussion and civil debate on American politics that are associated with multiple points of view.

PSY X012 – Introduction to Psychology

In this course, students will gain an introduction to the scientific study of human behavior and mental processes. Topics may be drawn from historical and current perspectives in psychology.

Student Learning Outcomes:

- Students will be able to identify basic psychological theories, terms, and principles from historical and current perspectives.
- Students will be able to recognize real-world applications of psychological theories, terms, and principles.
- Students will be able to recognize basic strategies used in psychological research.
- Students will be able to draw logical conclusions about behavior and mental processes based on empirical evidence.

SYG X000 – Principles of Sociology

In this course, students will gain an understanding of the basic sociological concepts and vocabulary, including the methodological tools, sociological perspectives, and scientific procedures used by social scientists to collect data and conduct research. Topics generally include: society and culture, institutions, socialization, social control, crime, social change, social groups, sex and gender, race and ethnicity, family, social class and social mobility, and population.

Student Learning Outcomes:

- Students will apply multiple sociological perspectives.
- Students will identify methodological tools used to evaluate sociological research questions.
- Students will identify patterned differences across social groups and changes over time.
- Students will understand dynamics between individual agencies and social structural forces.