In February 2024, the Board of Governors, Department of Education, and State Office of Articulation updated the State Comon Numbering System website, standardizing course descriptions and Student Learning Outcomes (SLOs) for State Core General Education courses after working with discipline committees composed of faculty from across the State University System and Florida College System institutions. They then hosted a webinar explaining that all Florida public institutions must adopt these descriptions for the State Core Courses. This change impacts the following courses. Faculty members that teach State Core courses must also ensure that the new descriptions appear on their syllabus, and that they utilize the state SLOs for the course in addition to any devised by the faculty member. These SLOs will be published on the UF General Education website for future reference.

SURVEYS THE DEVELOPMENT OF THE US FROM ITS COLONIAL ORIGINS TO THE END OF RECONSTRUCTION.
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, the Civil Rights Era, the Cold War, and the United States since 1989.

Surveys the emergence of modern America as an industrial and world power; the Progressive Era; WWI; the Great Depression and the New Deal; WWII; and the Cold War era.

Survey of Emergence of Modern America as Industrial and World Power. Progressive Era, WWI, Great Depressions, New Deal, WWII, Cold War Era.

United States Since 1877

Introductory Survey Since 1877 (GE Core)

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.
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 METHODS 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.

INTRODUces the four subfields of anthropology (sociocultural, biological, linguistic, and archaeology) through analyses of the cultural, social, and biological dimensions of human variation. Appropriate first course for those considering major or minor in anthropology.

GENERAL ANTHROPOLOGY

INTRODUCTION TO THE FOUR SUBFIELDS OF ANTHROPOLOGY (SOCIOCULTURAL, BIOLOGICAL, LINGUISTIC AND ARCHAEOLOGY) THROUGH ANALYSES OF THE CULTURAL, SOCIAL AND BIOLOGICAL DIMENSIONS OF HUMAN VARIATION. APPROPRIATE FIRST COURSE FOR STUDENTS CONSIDERING MAJOR OR MINOR IN ANTHROPOLOGY AS WELL AS NONMAJORS FULFILLING GENERAL EDUCATION REQUIREMENT. (S)

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 CONTEMPORARY ANTHROPOLOGICAL CONTRIBUTIONS.
IN THIS COURSE, STUDENTS WILL DEVELOP AN APPRECIATION OF AND THE ABILITY TO THINK CRITICALLY ABOUT CULTURE AND BE PROVIDED WITH THE TOOLS TO UNDERSTAND, ANALYZE, AND DISCUSS WORKS OF VISUAL ART AND MATERIAL CULTURE.

Introduces the visual arts from a global perspective with an emphasis on diversity in the United States. (H and D)

INTRODUCTION TO THE VISUAL ARTS FROM A GLOBAL PERSPECTIVE WITH AN EMPHASIS ON DIVERSITY IN THE UNITED STATES.

ART APPRECIATION: AMERICAN DIVERSITY AND GLOBAL ARTS

ART APPRECIATION (GE CORE)

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.
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 INFORMATION BY USING CRITICAL THINKING.

An elementary and largely nonmathematical survey of the universe of stars, planets, and galaxies. Get acquainted with the development of astronomy as a human activity and how people know what they know. Primarily for those not majoring in physical science or mathematics.

AN ELEMENTARY, LARGELY NONMATHEMATICAL SURVEY OF OUR UNIVERSE OF STARS, PLANETS, AND GALAXIES. ACQUAINTS THE STUDENT WITH THE DEVELOPMENT OF ASTRONOMY AS A HUMAN ACTIVITY WITH HOW WE KNOW AS WELL AS WHAT WE KNOW. PRIMARILY FOR THOSE NOT MAJORING IN PHYSICAL SCIENCE OR MATHEMATICS.

DISCOVERING THE UNIVERSE

DESCRIPTIVE ASTRONOMY (GE CORE)

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.

BSC2005

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.

A comprehensive introduction to living systems, including the scientific basis of biology, cell structure and function, genetic mechanisms, animal and plant anatomy and physiology,

A COMPREHENSIVE INTRODUCTION TO LIVING SYSTEMS, INCLUDING THE SCIENTIFIC BASIS OF BIOLOGY, CELL STRUCTURE AND FUNCTION, GENETIC MECHANISMS, ANIMAL AND PLANT ANATOMY

BIOLOGICAL SCIENCES

GENERAL BIOLOGY (GE CORE)

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
and ecology and evolutionary processes. Recommended for students not majoring in the natural sciences. (B) AND PHYSIOLOGY, AND ECOLOGY AND EVOLUTIONARY PROCESSES. RECOMMENDED FOR STUDENTS NOT MAJORING IN THE NATURAL SCIENCES. BSC2010 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. General Biology Core: the first of a two-semester sequence that prepares students for advanced biological sciences courses and allied fields. Studies the origin of life systems; of biological molecules and organization of living things at the subcellular, cellular and organismic levels; and of the activities of living forms in obtaining and utilizing energy. STUDY OF ORIGIN OF LIFE SYSTEMS, BIOLOGICAL MOLECULES AND ORGANIZATION OF LIVING THINGS AT SUBCELLULAR, CELLULAR AND ORGANISMIC LEVELS, AND OF ACTIVITIES OF LIVING FORMS IN OBTAINING AND UTILIZING ENERGY AND MATERIALS IN GROWTH, MAINTENANCE AND REPRODUCTION. INTEGRATED PRINCIPLES OF BIOLOGY I GENERAL BIOLOGY (GE CORE) 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
and materials in growth, maintenance and reproduction.

(B)

PROKARYOTIC AND EUKARYOTIC STRUCTURES AND PROCESSES OF CELL DIVISION AND REPLICATION.

• STUDENTS WILL EXPLAIN GENE EXPRESSION.

• STUDENTS WILL SOLVE PROBLEMS IN TRANSMISSION GENETICS.
CHM1020

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.

Provides non-science majors with a basic understanding of the substances and chemical transformations central to our lives. Introduces chemical concepts and principles help the student better understand the role and impact of modern chemistry in society. (P)

Provides non-science majors with a basic understanding of the substances and chemical transformations central to our lives. An introduction to chemical concepts and principles help the student better understand the role and impact of modern chemistry in society.

Chemistry for the Liberal Arts

General Chemistry for Liberal Studies I (GE Core)

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 balanced chemical equations.
CHM2045

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.

The first semester of the CHM 2045/CHM 2045L and CHM 2046/CHM 2046L sequence. Stoichiometry, atomic and molecular structure, the states of matter, reaction rates and equilibria. A minimum grade of C is required to progress to CHM 2046. (P)

First semester of the CHM 2045-2045L-2046-2046L sequence. Stoichiometry, atomic and molecular structure, the states of matter, reaction rates and equilibria. A grade of C or better is required to progress to CHM 2046.

General Chemistry 1

General Chemistry I (General Core)

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).
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<tr>
<th>Course Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>ECO2013</td>
<td>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. The nature of economics, economic concepts and institutions; growth, unemployment and inflation; money and banking; economic policies; and the international economy. (S)</td>
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</table>
ENC1101  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.

The principal elements of writing clearly, efficiently, and effectively. Also focuses on writing logical arguments, building research skills, and developing critical thinking through reading, writing, and discussion. (C) (WR)

Completion of this course with a grade of “C” or better is linked to earning the Fundamentals of Written Communication digital badge.

THIS COURSE INTRODUCES  STUDENTS TO  THE PRINCIPAL  ELEMENTS OF  WRITING  CLEARLY,  EFFICIENTLY AND  EFFECTIVELY. ENC 1101 ALSO  FOCUSES ON  WRITING LOGICAL  ARGUMENTS,  BUILDING RESEARCH SKILLS,  AND DEVELOPING CRITICAL  THINKING THROUGH  READING,  WRITING AND  DISCUSSION. (C)

EXPOSITORY  AND ARGUMENTATIVE  WRITING  ENGLISH COMPOSITION (GE CORE)  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.
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.

Integrated application of the scientific method to the earth sciences, including geologic materials, resources and processes; surface, groundwater and climate; environmental problems; and related topics. Emphasizes Florida examples. (P)

INTEGRATED APPLICATION OF THE SCIENTIFIC METHOD TO THE EARTH SCIENCES, INCLUDING: GEOLOGIC MATERIALS, RESOURCES AND PROCESSES; SURFACE, GROUNDWATER AND CLIMATE; ENVIRONMENTAL PROBLEMS; AND RELATED TOPICS. EMPHASIS IS ON FLORIDA EXAMPLES.

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 DESCRIBE INTERACTIONS BETWEEN HUMANS AND THE EARTH’S SPHERES.

- STUDENTS WILL APPLY THEIR UNDERSTANDING OF EARTH SCIENCE PRINCIPLES TO COMPLEX GLOBAL AND LOCAL ISSUES.
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.

Delivered from a systems perspective, an interdisciplinary approach explores contemporary environments that are comprised of both human and non-human elements. Explores physical, chemical, and biological processes to understand pressing environmental challenges and cultural values, attitudes, and norms expressed by individuals and populations around the globe. (B) (N) (P)

INTRODUCTION TO ENVIRONMENTAL SCIENCE (GE CORE)

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.
<table>
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<tr>
<th>GLY2010</th>
<th>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.</th>
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<tr>
<td>Materials, structures and surface features of the earth and processes which have produced them. Related laboratory demonstrations and experiences. (P)</td>
<td>MATERIALS, STRUCTURES, SURFACE FEATURES OF THE EARTH AND PROCESSES WHICH HAVE PRODUCED THEM. RELATED LABORATORY DEMONSTRATIONS AND EXPERIENCES.</td>
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<tr>
<td>• STUDENTS WILL APPLY THEIR UNDERSTANDING OF GEOLOGIC PRINCIPLES TO COMPLEX ISSUES.</td>
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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 SELECTIONS FROM THE WESTERN CANON. WRITTEN ANALYSIS OF LITERARY WORKS MAY BE REQUIRED. STUDENTS WILL BE PROVIDED WITH OPPORTUNITIES TO PRACTICE CRITICAL INTERPRETATION.

Examines the important role literature has played in individuals' lives and in society, presenting a range of literary styles and genres, from different countries and historical periods. Special attention paid to development of critical skills of analysis and interpretation.

EXAMINES THE IMPORTANT ROLE LITERATURE HAS PLAYED IN INDIVIDUALS LIVES AND IN SOCIETY, PRESENTING A RANGE OF LITERARY STYLES AND GENRES, FROM DIFFERENT COUNTRIES AND HISTORICAL PERIODS. SPECIAL ATTENTION PAID TO DEVELOPMENT OF CRITICAL SKILLS OF ANALYSIS AND 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.
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.

Online entry-level algebra course for college students. (M)

ENTRY-LEVEL ALGEBRA FOR COLLEGE STUDENTS.

BASIC COLLEGE ALGEBRA

COLLEGE ALGEBRA (GE CORE)

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.
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 INCREASE THEIR PROBLEM-SOLVING ABILITY THROUGH PRACTICAL APPLICATION AND DIVERGENT THINKING. THIS COURSE IS APPROPRIATE FOR STUDENTS IN A WIDE RANGE OF DISCIPLINES/PROGRAMS.

MATHMATICAL THINKING (GE CORE)

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.

An introduction to mathematical problem solving. Topics include mathematical modeling, data visualization and analysis, geometry, and logic. Appropriate for non-majors.
MAC 2311

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.

Introduces analytic geometry; limits; continuity; differentiation of algebraic, trigonometric, exponential and logarithmic functions; applications of the derivative; inverse trigonometric functions; differentials; introduction to integration; and the fundamental theorem of calculus. (M) Credit will be given for, at most, one of MAC 2233, MAC 2311 and MAC 3472.

INTRODUCTION TO ANALYTIC GEOMETRY; LIMITS; CONTINUITY; DIFFERENTIATION OF ALGEBRAIC, TRIGONOMETRIC, EXPONENTIAL, AND LOGARITHMIC FUNCTIONS; APPLICATIONS OF THE DERIVATIVE; INVERSE TRIGONOMETRIC FUNCTIONS; DIFFERENTIALS; INTRODUCTION TO INTEGRATION; AND THE FUNDAMENTAL THEOREM OF CALCULUS.

INTRODUCTION TO ANALYTIC GEOMETRY; LIMITS; CONTINUITY; DIFFERENTIATION OF ALGEBRAIC, TRIGONOMETRIC, EXPONENTIAL, AND LOGARITHMIC FUNCTIONS; APPLICATIONS OF THE DERIVATIVE; INVERSE TRIGONOMETRIC FUNCTIONS; DIFFERENTIALS; INTRODUCTION TO INTEGRATION; AND THE FUNDAMENTAL THEOREM OF CALCULUS.

ANALYTIC GEOMETRY AND CALCULUS 1

CALCULUS I (GE CORE)

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.
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.

Experiences how we experience music and how it teaches us about ourselves and our world. Illuminates how music both shapes and is shaped by social, political, national, and cultural forces. Music from around the world demonstrates a variety of musical experiences within historical and contemporary cultural settings. (H and N)

MUL 2010 EXAMINES HOW WE EXPERIENCE MUSIC AND HOW IT TEACHES US ABOUT OURSELVES AND OUR WORLD. IT ILLUMINATES HOW MUSIC BOTH SHAPES AND IS SHAPED BY SOCIAL, POLITICAL, NATIONAL, AND CULTURAL FORCES. MUSIC FROM AROUND THE WORLD DEMONSTRATES A VARIETY OF MUSICAL EXPERIENCES WITHIN HISTORICAL AND CONTEMPORARY CULTURAL SETTINGS.

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.
OCE1001 USING THE SCIENTIFIC METHOD, CRITICAL THINKING SKILLS, AND 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.

Explores the geological, physical, and biological characteristics of Earth's marine realm. Includes discussion of scientific methods, the history of oceanography, and emphasizes understanding of the mutual interactions between humans and the ocean. (P)


INTRODUCTION TO OCEANOGRAPHY (GE CORE)

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 DESCRIBE INTERACTIONS BETWEEN HUMANS AND THE OCEAN REALM.

• STUDENTS WILL APPLY THEIR UNDERSTANDING OF OCEANOGRAPHIC PRINCIPLES TO VARIOUS MARINE ISSUES.
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<th>Course</th>
<th>Description</th>
<th>Student Learning Outcomes</th>
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</table>
| PHI2010  | 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. Variable topics introduction to philosophy through study of traditional questions about the existence of God, the nature of the mind, the definition of good, freedom of the will, and criteria of truth and knowledge. (H) (WR) | • 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. |
| PHY2020  | 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. Fundamental principles of physics in mechanics, electricity and modern physics as applied to conservation laws. An in-depth analysis of selected topics with lecture demonstration, films and other teaching aids. (P) | • 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. |
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<tr>
<th>Course Code</th>
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<tr>
<td>PHY2048</td>
<td>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.</td>
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<td></td>
<td>THE FIRST OF A TWO-SEMESTER SEQUENCE OF PHYSICS FOR SCIENTISTS AND ENGINEERS. THE COURSE COVERS NEWTONIAN MECHANICS AND INCLUDES MOTION, VECTORS, NEWTON'S LAWS, WORK AND CONSERVATION OF ENERGY, SYSTEMS OF PARTICLES, COLLISIONS, EQUILIBRIUM, OSCILLATIONS AND WAVES.</td>
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<td></td>
<td>PHYSICS WITH CALCULUS 1</td>
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<td>GENERAL PHYSICS WITH CALCULUS I (GE CORE)</td>
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**STUDENT LEARNING OUTCOMES:**

- STUDENTS WILL PERFORM SIMPLE CALCULATIONS RELEVANT TO REAL WORLD PROBLEMS.

- 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.

PHY2053

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.

First semester of introductory physics de-emphasizing calculus. Structure and properties of matter; kinematics, dynamics and statics; momentum and energy; rotation, elasticity; vibration; fluids; temperature and expansion.

THE SECOND OF A TWO-SEMESTER SEQUENCE OF PHYSICS FOR SCIENTISTS AND ENGINEERS. CONTENT INCLUDES COULOMBS LAW, ELECTRIC FIELDS AND POTENTIALS, CAPACITANCE, CURRENTS AND CIRCUITS, AMPERES LAW, FARADAYS LAW, INDUCTANCE, MAXWELLS EQUATIONS.

PHYSICS 1

GENERAL PHYSICS I (GEN CORE)

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
<table>
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<tr>
<th>heat transfer, thermal behavior of gases; wave motion and sound. (P)</th>
<th>ELECTROMAGNETIC WAVES, RAY OPTICS, INTERFERENCE AND DIFFRACTION. (P)</th>
<th>MECHANICS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• STUDENTS WILL IDENTIFY AND ANALYZE RELEVANT INFORMATION PRESENTED IN VARIOUS FORMATS SUCH AS GRAPHS, TABLES, DIAGRAMS, AND/OR MATHEMATICAL FORMULATIONS.</td>
<td>• STUDENTS WILL SOLVE REAL WORLD PROBLEMS USING CRITICAL THINKING SKILLS AND KNOWLEDGE DEVELOPED FROM THIS COURSE.</td>
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STUDENT LEARNING OUTCOMES:
• STUDENTS WILL DEMONSTRATE AN UNDERSTANDING OF THE BASIC PRINCIPLES AND PRACTICES OF AMERICA’S CONSTITUTIONAL REPUBLIC.
• 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.
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.

Introduction to psychology; this course is the prerequisite for advanced courses. Emphasis is on psychology as a research enterprise. Students are required to participate as subjects in psychological research or to write a paper on a psychological research article.

Designed to provide a broad, general introduction to the field of psychology. This course is the prerequisite for advanced courses in psychology. Emphasis is on psychology as a research enterprise. Students are required to participate as subjects in psychological research or write a paper on a psychological research article.

General psychology introduction (GE core)

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.
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.

Graphical and numerical descriptive measures. Simple linear regression. Basic probability concepts, random variables, sampling distributions, central limit theorem. Large and small sample confidence intervals and significance tests for parameters associated with a single population and for comparison of two populations. Use of statistical computer software and computer applets to analyze data and explore new concepts. (M)

GRAPHICAL AND NUMERICAL DESCRIPTIVE MEASURES. SIMPLE LINEAR REGRESSION. BASIC PROBABILITY CONCEPTS, RANDOM VARIABLES, SAMPLING DISTRIBUTIONS, CENTRAL LIMIT THEOREM. LARGE AND SMALL SAMPLE CONFIDENCE INTERVALS AND SIGNIFICANCE TESTS FOR PARAMETERS ASSOCIATED WITH A SINGLE POPULATION AND FOR COMPARISON OF TWO POPULATIONS. USE OF STATISTICAL COMPUTER SOFTWARE AND COMPUTER APPLETS TO ANALYZE DATA AND EXPLORE NEW CONCEPTS.

INTRODUCTION TO STATISTICS I

STATISTICAL METHODS I (GE CORE)

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 BROADER DECISIONS BASED ON SAMPLE DATA.

• STUDENTS WILL MODEL LINEAR RELATIONSHIPS BETWEEN QUANTITATIVE VARIABLES USING CORRELATION AND LINEAR REGRESSION.
NEW CONCEPTS.
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.

Studies history, literature, forms, styles and philosophies of theatre from a humanistic approach. (D and H)

STUDY OF HISTORY, LITERATURE, FORMS, STYLES AND PHILOSOPHIES OF THEATRE FROM A HUMANISTIC APPROACH. (H)

THEATRE APPRECIATION

THEATRE APPRECIATION (GE CORE)

STUDENT LEARNING OUTCOMES:

• STUDENTS WILL IDENTIFY THE BASIC PRINCIPLES OF THEATRICAL PERFORMANCE, DESIGN, TECHNOLOGY, ORGANIZATION, AND MANAGEMENT.

• STUDENTS WILL ASSESS THE SIGNIFICANCE OF 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, COMPARA AND CONTRAST THEATER AS BOTH AN EXPRESSION ART FORM AND A COMMERCIAL INDUSTRY.