

College of Arts & Sciences Preview Survey: Course Descriptions

Diverse Cultures

ANTH 1001. Introductory Anthropology. 3 cr. hrs.

Introduction to human social and cultural variation. Prehistory as reflected in archaeology. Human biological evolution as manifest in paleontology. Human biological variation in the contemporary world.

HIST 1301. Survey of Latin America. 3 cr. hrs.

Survey of Latin American history and culture from pre-Columbian times to the present, emphasizing the historical development of modern traditions, such as multi-ethnic identities and political authoritarianism, and the skills and sources for doing Latin American history.

HIST 1401. Africa. 3 cr. hrs.

Survey of African peoples and cultures, including the Sudanic empires, Islamic influences, European colonialism, and national independence that also emphasizes the skills and sources for doing African history.

HIST 1501. East Asia. 3 cr. hrs.

Survey of major political, social and economic themes in Chinese and Japanese cultures from ancient times to the present, emphasizing major cultural and historical events which have significantly influenced the development of Asian civilization and the skills and sources for doing Asian history.

INPS 2010. Introduction to Peace Studies. 3 cr. hrs.

An interdisciplinary, introductory seminar for students interested in Peace Studies. Students explore faith-based and secular theoretical and practical approaches to the concepts of peace, through critical discussion of relevant texts and reflective writing.

Histories of Cultures and Societies

HIST 1001. Growth of Western Civilization to 1715. 3 cr. hrs.

An interpretative survey of Western Civilization from its beginnings to the Early Modern period.

HIST 1002. Growth of Western Civilization since 1715. 3 cr. hrs.

An interpretative survey of Western Civilization from the Early Modern period to the contemporary era.

HIST 1101. Introduction to American History. 3 cr. hrs.

A survey of American history from the colonial origins to the present.

HIST 1301. Survey of Latin America. 3 cr. hrs.

Survey of Latin American history and culture from pre-Columbian times to the present, emphasizing the historical development of modern traditions, such as multi-ethnic identities and political authoritarianism, and the skills and sources for doing Latin American history.

HIST 1401. Africa. 3 cr. hrs.

Survey of African peoples and cultures, including the Sudanic empires, Islamic influences, European colonialism, and national independence that also emphasizes the skills and sources for doing African history.

HIST 1501. East Asia. 3 cr. hrs.

Survey of major political, social and economic themes in Chinese and Japanese cultures from ancient times to the present, emphasizing major cultural and historical events which have significantly influenced the development of Asian civilization and the skills and sources for doing Asian history.

Human Nature and Ethics

PHIL 1001. Philosophy of Human Nature. 3 cr. hrs.

Investigation into the meaning of rational life. Addresses the following four problem areas: human choice, human cognition, the affective, social and spiritual dimensions of the human person, and the unity of the human being. A substantive treatment of classical and Christian philosophical approaches is included.

PHIL 2310. Theory of Ethics. 3 cr. hrs.

An investigation into the moral dimension of human life. Among the topics to be considered are the norms of morality and the general process of moral decision-making. Traditional natural law is one of the points of view included.

Individual and Social Behavior

CRLS 1001. Introduction to Criminology. 3 cr. hrs.

Survey of recent trends in crime and delinquency. The nature of and societal reaction to criminal behavior. Personal and social factors in crime causation. Critical analysis of criminological theories as well as the operation of criminal justice agencies.

ECON 1001. Introduction to Economics. 3 cr. hrs.

An introductory survey of economic issues for non-majors with an emphasis on using economic concepts as elements of critical reasoning. Microeconomic topics include markets and the role of government in a market economy. Macroeconomic topics include the banking system, inflation and unemployment. International issues include the balance of trade and foreign exchange. ***Will not be counted towards the Economics major.***

ECON 1103. Principles of Microeconomics. 3 cr. hrs.

Institutions and processes of market specialization and exchange. Supply and demand and their determinants. Pricing and production decisions of the firm under varying competitive conditions. The role of government in a modern mixed economy. Microeconomic analysis applied to selected economic problems.

POSC 2201. American Politics. 3 cr. hrs.

Problems of organizing and using governmental power at the national level. The principles of the U.S. Constitution. The Presidency, Congress and the federal judiciary. Public opinion, elections, political parties and interest groups. Issues of public policy.

POSC 2601. International Politics. 3 cr. hrs.

Patterns of interaction among nations and subnational and supranational entities. Cooperation and conflict. National interest, elements of power and war. Morality and human rights issues; economic, environmental, and resource issues in world politics. Recent developments and their impact.

PSYC 1001. General Psychology. 3 cr. hrs.

Introduction to scientific psychology: biological bases of behavior; perception; principles of learning; intelligence and personality testing; current theories of personality; conflict, adjustment and mental health; interpersonal relations; social processes; applications of psychological principles to human affairs. Three hours of classroom instruction and one optional discussion hour for review of exams and special assistance with selected areas of course content.

SOCI 1001. Principles of Sociology. 3 cr. hrs.

An introductory survey of the discipline including social structures, social institutions, social differentiation and stratification, social power, the processes of human interactions, and methods of sociological investigation.

SOCI 2200. The Family. 3 cr. hrs.

The structure and function of family types including analysis of marital and parent-child relationships. The relation of the family to other social institutions. Changing patterns of relationships and structure in the family.

SOWJ 1001. Introduction to Social Welfare and Justice. 3 cr. hrs.

Introduction to social work, social welfare and social justice; explores the ethics, values and goals of social welfare and justice. Examines historic, contemporary and global social issues and social change practices. Service Learning links the experiential to the theoretical.

WGST 1001. Introduction to Women's and Gender Studies. 3 cr. hrs.

Introduction to the interdisciplinary field of Women's and Gender Studies, an academic area of study focused on the ways sex and gender manifest themselves in our social, cultural, and political lives. Define and learn to use key terms and concepts such as sex, gender, sexuality, embodiment, feminism, patriarchy, etc. Course materials will include classic and contemporary scholarship from a variety of disciplines, as well as personal narratives of gendered lives.

Mathematical Reasoning

COSC 1000. Introduction to Computer Science. 3 cr. hrs.

Introduction to the science behind today's computerized society. Emphasis placed on understanding the breadth and current status of computer science rather than the development of skills. Topics include machine architectures, operating systems, networking, algorithms and their development, programming languages, artificial intelligence, and data representation systems. (Previous computer experience is not required.) **Prereq:** Two years of college preparatory mathematics. This course satisfies the computer option in the Arts and Sciences core curriculum.

MATH 1300. The Nature of Mathematics. 3 cr. hrs.

Concepts of mathematics for liberal arts students. Emphasis on understanding and appreciating concepts rather than developing computational skills. For example, such topics as the historical development of ideas, role of abstraction, and relationship between different areas of mathematics is given precedence over performance of arithmetic and algebraic manipulations. **Prereq:** Two years of college preparatory mathematics.

MATH 1390. Finite Mathematics. 3 cr. hrs.

Mathematics of finance, including simple and compound interest, present and future value of ordinary annuities, sinking funds, and amortization schedules. Matrices, linear systems and linear programming. Combinatorics and elementary probability theory. **Prereq:** MATH 1100 (college algebra) or equivalent. Equivalent is three years of college preparatory mathematics.

MATH 1400. Elements of Calculus. 3 cr. hrs.

The basic concepts and techniques of differential and integral calculus. Applications and examples chosen primarily from economics, biology, the social and behavioral sciences and business. **Prereq:** MATH 1100 (college algebra) or equivalent. Equivalent is three years of college preparatory mathematics.

MATH 1410. Calculus for the Biological Sciences. 3 cr. hrs.

Fundamental concepts and techniques of differential and integral calculus, logarithmic, exponential and trigonometric functions, examples and applications from biology and medicine. **Prereq:** MATH 1100 (college algebra) or equivalent. Equivalent is three years of college preparatory mathematics.

MATH 1450. Calculus 1. 4 cr. hrs.

Functions of one variable, limits and continuity. The derivative and the definite integral with applications. **Prereq:** MATH 1101 (college algebra) or equivalent. Equivalent is three to four years of college preparatory mathematics including topics listed in description of MATH 1101.

Topics included in MATH 1101: Pre-calculus mathematics including basic algebraic operations, equations, inequalities, complex numbers, graphs, functions, zeros of polynomials, systems of equations, and matrices.

MATH 1700. Modern Elementary Statistics. 3 cr. hrs.

Fundamental theory and methods of statistics without calculus. Descriptive statistics, elements of probability theory, estimation, tests of hypotheses, regression, correlation, introduction to computer methods of statistical tabulation and analysis. Recommended for students seeking a general introduction to statistical concepts and not intended to be a final course in statistics for students who need a thorough working knowledge of statistical methods. **Prereq:** Two years of college preparatory mathematics. May not be taken for credit by students who have received college credit for another probability or statistics course. **Do not choose this course if you are in these majors: Anthropology, Criminology and Law Studies, Psychology, Sociology or Social Welfare and Justice. (You will take a different statistics course later).**

Science and Nature

ARSC 1020. Major Concepts in Modern Science 1. 4 cr. hrs.

An interdisciplinary, integrated study of processes and principles of physics and their application to astronomy and earth science. Topics will include: describing motion, energy and momentum, electricity and magnetism, waves, sound and light, reflection and refraction, heat, rocks and minerals, the earth (plate tectonics, land, and water cycles), weather, the solar system, and stellar life cycles. Scientific inquiry as a means of knowledge: major technological contributions to modern societies, stability, information transfer, and emphasizing relevant physical processes in specific environments. May be counted as Natural Science toward the Arts and Sciences College Curriculum requirements, and for elementary/middle school and middle/secondary teaching certification. Does not count toward major requirements for biological sciences, chemistry, physics, and broad field science for early adolescence/adolescence teacher preparation.

BIOL 1001. General Biology 1. 3 cr. hrs.

Covers the molecular basis of life, biology of the cell, genetics and evolution in a genetic context.

BIOL 1009. Biology for Non-Science Majors. 3 cr. hrs.

Designed for non-science students, the course introduces biological concepts and will focus on how scientific knowledge is created. Special emphasis on cell function, evolutionary biology, genetics, and modern genetic methods. Topics covered will include inheritance of genetic traits, cloning, and biotechnology, nervous system evolution, speciation, and extinction. May be counted toward the Natural Science requirement of the College Curriculum.

BIOL 1410. Biology of Human Disease. 3 cr. hrs.

Explores human physiology in relationship to health and disease. Topics include the cardiovascular system, heart disease, the immune system, infectious diseases, cancer, drug addiction, the brain, and neurodegenerative disorders such as Alzheimer's disease. Emphasis on understanding scientific reporting and critically assessing the value and importance of published findings. Students will be required to research, analyze, and critique an independent topic based on science in the news. Designed for non-science students and Biology for the Professions. ***Does not fulfill biological sciences requirements except for Biology for the Professions.***

CHEM 1001. General Chemistry 1. 4 cr. hrs.

Introductory college chemistry. Fundamental principles of chemistry including stoichiometry, physical states of matter, energy relationships, periodic table, atomic and molecular structure and solutions. The following mathematical concepts are used in CHEM 1001 and CHEM 1002: Scientific notation, logarithms, the quadratic equation and proportionality.

PHYS 1001. General Physics 1. 4 cr. hrs.

Newton's laws, linear motion, circular and harmonic motion, fluids, heat, kinetic theory, wave motion and sound. **Prereq:** High school algebra, geometry, and trigonometry or equivalent.

PHYS 1003. General Physics with Introductory Calculus 1. 4 cr. hrs.

Survey of classical physics for science and engineering majors. Kinematics in one and two dimensions. Newton's laws of motion and dynamics, including rotation of rigid bodies. Energy concepts in physical systems. Newton's law of universal gravitation. The first law of thermodynamics, harmonic motion, and Einstein's special relativity. A command of high school algebra, geometry and trigonometry is assumed. Requires the use of introductory calculus. **Prereq:** MATH 1450 can be taken concurrently.

PHYS 1007. Survey of Meteorology. 3 cr. hrs.

An introduction to the science of the atmosphere as it relates to the weather of the earth, including important environmental issues such as global warming and air pollution. Topics include: atmospheric gasses, heat transfer, causes of the seasons, humidity, clouds, atmospheric stability and motions, air masses, fronts and pressure systems, thunderstorms, tornados, hurricanes and weather forecasting.

PHYS 1008. Astronomy and Space Physics. 3 cr. hrs.

Physics of the solar system, stars, galaxies and the universe. Experimental methods of observational astronomy, telescopes, and space probes. Special topics such as black holes, neutron stars and quasars are covered. This course satisfies the Arts and Sciences College Curriculum Natural Science requirement.

PHYS 1009. Earth and Environmental Physics. 3 cr. hrs.

Impact of human activities on the environment, especially the consumption of fossil fuels. Population distribution and growth. Energy balance of the earth. Energy, land and water use, the water cycle. Effects of chemical and physical pollutants on water and the atmosphere. Course designed for non-science majors. This course satisfies the Arts and Sciences College Curriculum Natural Science requirement.