

Course
Catalog
for
Partner
High
Schools



University of Connecticut

Early College Experience

Program and course descriptions for partner high schools to use in their high school course catalog, per NACEP accreditation.

2009 – 10

COURSE CATALOG WRITE-UP

Please use the following program description for the high school course catalog.

UConn Early College Experience

UConn Early College Experience (ECE) provides academically motivated students with the opportunity to take university courses while in high school. These challenging courses allow students to preview college work, build confidence in their readiness for college, and earn college credits that provide both an academic and a financial head-start on a college degree.

UConn ECE instructors are high school teachers certified as adjunct professors by the University. UConn ECE faculty foster independent learning, creativity and critical thinking - all important for success in college. **[School name]** offers UConn ECE courses in **[discipline(s)]**. To support rigorous learning, University of Connecticut academic resources, including library and online classroom access, are available to all UConn ECE students.

UConn ECE students must successfully complete the course with a grade of C or above in order to receive University credit. UConn credits are transferable to many colleges and universities.

Students are charged a \$25 per credit processing fee. For additional program information visit: www.ece.uconn.edu.

COURSE DESCRIPTIONS

The following course descriptions are the exact text that is used by the University of Connecticut's Office of the Registrar. Please incorporate the following descriptions as appropriate in the high school course catalog.

AMERICAN STUDIES

AMST 1201: Seminar in American Studies

(Also offered as ENGL 1201 and HIST 1503.)

Three credits. Not open to students who have passed INTD 276. What is an American? A multi-disciplinary inquiry into the diversity of American societies and cultures.

ART

ART 1030: Drawing I

Three credits. Two 3-hour or three 2-hour studio periods. Fundamental principles of drawing based on observation.

BIOLOGY

BIO 1107: Principles of Biology I

May be taken in either order. Four credits. Three class periods and one 3-hour laboratory period. Students may not receive more than 12 credits for courses in biology at the 1000's level. A course in high school level chemistry or concurrent enrollment in CHEM 1127 are recommended for students enrolling in 1107. Designed to provide a foundation for more advanced courses in Biology and related sciences. Topics covered include molecular and cell biology, animal anatomy and physiology (BIOL 1107); ecology, evolution, genetics, and plant biology, (BIOL 1108). Laboratory exercises in BIOL 1107 include dissection of preserved animals.

BIO 1108: Principles of Biology II

May be taken in either order. Four credits. Three class periods and one 3-hour laboratory period. Students may not receive more than 12 credits for courses in biology at the 1000's level. A course in high school level chemistry or concurrent enrollment in CHEM 1127 are recommended for students enrolling in 1107. Designed to provide a foundation for more advanced courses in Biology and related sciences. Topics covered include molecular and cell biology, animal anatomy and physiology (BIOL 1107); ecology, evolution, genetics, and plant biology, (BIOL 1108). Laboratory exercises in BIOL 1107 include dissection of preserved animals.

CHEMISTRY

CHEM 1127Q: General Chemistry I

Four credits. Three class periods and one 3-hour laboratory period. Students who have passed CHEM 1122 will receive only 2 credits for CHEM 1127 but 4 credits will be used for calculating the GPA. CHEM 1127 is not open

for credit to students who have passed CHEM 1124 or 1137 or 1147; CHEM 1128 is not open to students who have passed CHEM 1126 or 1138 or 1148. Recommended preparation for CHEM 1127Q; MATH 1010 or equivalent.

Designed to provide a foundation for more advanced courses in chemistry. Atomic theory; laws and theories concerning the physical and chemical behavior of gases, liquids, solids, and solutions. Properties of some of the more familiar elements and their compounds. Quantitative measurements illustrating the laws of chemical combination in the first semester lab. Equilibrium in solutions and qualitative reactions of the common cations and anions in the second semester lab.

CHEM 1128Q: General Chemistry II

Four credits. A continuation of CHEM 1127Q.

CLASSICS

CAMS 3101: Topics in Advanced Greek

Credits and hours by arrangement. With a change in content, may be repeated for credit. Reading of Ancient Greek texts in the original.

CAMS 3102: Topics in Advanced Latin

Three credits. Prerequisite: CAMS 1124 or three or more years of Latin in high school. With a change in content, may be repeated for credit. Reading of Latin texts in the original.

COMPUTER SCIENCE & ENGINEERING

CSE 1100C: Introduction to Computing

Two credits. Two class periods of lecture and one 1-hour of laboratory period per week. Recommended preparation: MATH 1010Q or equivalent. No previous programming experience required. Not open for credit to students who have passed CSE 110C or 130C.

Problem solving with the computer, basics of data representation and computer organization, procedural and object-oriented programming in a modern language including control structures, functions and parameter passing, one and two dimensional arrays, numerical error and basic numerical methods. Examples taken from various disciplines. Programming projects required. Intellectual property issues discussed.

CSE1102: Object Oriented Design & Programming

Three credits. Three class periods of lecture and one 75 minute laboratory period per week. Prerequisite: CSE 1100C. Not open to students who have passed CSE 124C. Principles of object oriented programming including classes, polymorphism, encapsulation and information hiding, and inheritance. Principles of object oriented design. Program debugging and documentation techniques. Implementation and simple analysis of algorithms for sorting and searching. Event-driven programming and the use of libraries for user interfaces. Introduction to computer history. Programming assignments.

ECONOMICS

ECON 1202: Principles of Macroeconomics

Three credits. May be taken before or after ECON 1201. Not open for credit to students who have passed ECON 1200 or 113. May not be taken concurrently with ECON 1200.

The organization and function of the economic system as a total unit. Economic decisions, institutions, and policies that determine levels and rates of growth of production, employment, and prices. Topical subjects (e.g., government budget deficits and current interest-rate policy).

ECON 1201: Principles of Microeconomics

Three credits. May be taken before or after ECON 1202. Not open for credit to students who have passed ECON 1200 or 113. May not be taken concurrently with ECON 1200.

How the invisible hand of the market functions through the economic decisions of firms and individuals. How prices, wages and profits are determined, resources are allocated and income is distributed. Topical subjects (e.g., energy policy and health care).

ENGLISH

ENGL 1010: Seminar in Academic Writing

Four credits. Not open for credit to students who have passed ENGL 105. Students placed in ENGL 1004 must pass that class before enrolling in ENGL 1010.

Instruction in academic writing through interdisciplinary reading. Assignments emphasize interpretation, argumentation, and reflection. Revision of formal assignments and instruction on grammar, mechanics and style.

ENGL 1011: Seminar in Writing Through Literature

Four credits. Not open for credit to students who have passed ENGL 109. Students placed in ENGL 1004 must pass that class before enrolling in ENGL 1011.

Instruction in academic writing through literary reading. Assignments emphasize interpretation, argumentation, and reflection. Revision of formal assignments and instruction on grammar, mechanics and style.

FRENCH

FREN: 3267: French Language and Culture

Three credits. The study of French and Francophone culture through fiction, non-fiction, journalism and film. Emphasis on perfecting both oral and written expression through discussion, presentations, and composition on assigned topics.

FREN 3268W: Writing in French

Prerequisite: ENGL 1010 or 1011 or 3800. Recommended preparation: FREN 1164 or 1175 or three years of high school French or instructor consent.

Three credits. Advanced study of French texts and extensive written practice in a variety of forms ranging from compositions, essays, summaries and film reviews.

MODERN GREEK

MGRK 1101: Elementary Level I

MGRK 1102: Elementary Level II

Three credits. Consult Program Director Manuela.m.wagner@uconn.edu for more information and course descriptions.

HUMAN DEVELOPMENT & FAMILY STUDIES

HDFS 1070: Individual & Family Development

Three credits. Human development throughout the life span, with emphasis upon the family as a primary context.

HISTORY

HIST 1300: Western Traditions Before 1500

Three credits. An analysis of the traditions and changes which have shaped Western political institutions, economic systems, social structures and culture in ancient and medieval times.

HIST 1400: Modern Western Traditions

Three credits. History of political institutions, economic systems, social structures, and cultures in the modern Western world.

HIST 1501: United States History to 1877

Three credits. Not open to students who have passed HIST 231 or HIST 231W. Surveys political, economic, social, and cultural developments in American history through the Civil War and Reconstruction.

HIST 1502: United States History Since 1877

Three credits. Not open to students who have passed HIST 232 or HIST 232W. Surveys political, economic, social, and cultural developments in American history from 1877 to the present.

ITALIAN

ILCS: 3239: Composition & Conversation I

Three credits. Prerequisite: ILCS 1148 or equivalent. Practice in written and oral composition. Syntax study.

ILCS 3240: Composition & Conversation II

Three credits. Prerequisite: ILCS 3239 or equivalent. Further practice in written and oral composition. Treatment of the finer points in syntax.

MARITIME STUDIES

MAST 1101: Introduction to Maritime Studies

Three credits. An introduction to the interdisciplinary study of maritime-related topics with an examination of the maritime physical environment and maritime cultures, history, literature, and industries.

MARINE SCIENCE

MARN 1002: Introduction to Oceanography

Three credits. Three class periods per week and two afternoon cruises per semester. A background in secondary school physics, chemistry or biology is recommended. Not open to students who have passed MARN 1003.

Processes governing the geology, circulation, chemistry and biological productivity of the world's oceans. Emphasis is placed on the interactions and interrelationships between physical, chemical, biological and geological processes that contribute to both the stability and the variability of the marine environment. A fee of \$10 is charged for this course.

MATHEMATICS

MATH 1030Q: Elementary Discrete Mathematics

Three credits. Recommended preparation: MATH 1010, 1011 or the equivalent. Not open for credit to students who have passed any mathematics course other than MATH 1010, 1011, 1020, 1040, 1050, 1060 or 1070.

Problem solving strategies, solutions of simultaneous linear equations, sequences, counting and probability, graph theory, deductive reasoning, the axiomatic method and finite geometries, number systems.

MATH 1040Q: Elementary Mathematical Modeling

Three credits. Recommended preparation: MATH 1010, 1011 or the equivalent. Not open to students who have passed any mathematics course other than MATH 1010, 1011, 1020, 1030, 1050, or 1070. This course and MATH 1060 cannot both be taken for credit. This course should not be considered as adequate preparation for MATH 1071, 1120, 1131, or 1151.

Use of algebraic and trigonometric functions with technology to analyze quantitative relationships and illustrate the role of mathematics in modern life; graphical numerical and symbolic methods. Most sections require a graphing calculator; some require work with a computer spreadsheet.

MATH 1125Q: Calculus Ia

Three credits. Recommended preparation: some exposure to the content of MATH 1060 (Precalculus) or the equivalent. Students cannot receive credit for Math 1125 and Math 1120, 1131, or 1151.

Limits, derivatives, and extreme values of algebraic, trigonometric, exponential and logarithmic functions, with supporting algebraic topics. Math 1125Q covers the content of approximately the first half of Math 1131Q.

MATH 1126Q: Calculus Ib

Three credits. Prerequisite: Math 1125Q . Students cannot receive credit for Math 1126 and Math 1121, 1131, 1151.

A continuation of the differential calculus of algebraic, trigonometric, exponential and logarithmic functions of Math 1125 ending with antidifferentiation, the definite integral, some techniques and applications. Math 1126Q covers the content of approximately the second half of Math 1131Q.

MATH 1131: Calculus I

Four credits. Prerequisite: Passing score on the Calculus Placement Survey. Students cannot receive credit for MATH 1131 and either MATH 1120, 1121, 120, or 1151. Suitable for students with some prior calculus experience. May be used in place of MATH 1120, 120, or 1151 to fulfill any requirement satisfied by MATH 1120, 120, or 1151.

Limits, continuity, differentiation, antidifferentiation, definite integrals, with applications to the physical and engineering sciences. Sections with QC credit integrate computer-laboratory activity.

MATH 1132Q: Calculus I

Four credits. Prerequisite: MATH 1121, 1131, or 1151, or advanced placement credit for calculus (a score of 4 or 5 on the Calculus AB exam or a score of 3 on the Calculus BC exam). Recommended preparation: A grade of C- or better in MATH 1121 and 1131. Not open to students who have passed MATH 1122, 121, or 1152. Substitutes for MATH 1122 or 121 as a requirement.

Transcendental functions, formal integration, polar coordinates, infinite sequences and series, vector algebra and geometry, with applications to the physical sciences and engineering. Sections with QC credit integrate computer-laboratory activity.

MUSIC

MUSI 1011: Fundamentals of Music I

Three credits. *Maker* Basic skills in note reading, rhythm, meter, pitch symbols, scales, key-signatures, intervals, and triads. No previous training is required.

MUSI 1012: Introduction to Ear Training

Three credits. Music reading, sight-singing, and dictation.

MUSI 1004: Non-Western Music

Three credits. Not open for credit to students who have passed MUSI 3421W. Intended primarily for students who are not music majors. Folk, popular, and classical musics of selected non-Western cultures, with an emphasis on the distinctive characteristics of each culture.

MUSI 1001: Music Appreciation

Three credits. No previous training required. Not appropriate for students who have previously passed MUSI 1021 or 1022. Intended primarily for students who are not music majors. An approach toward intelligent listening, illustrated by recordings.

NATURAL RESOURCES AND THE ENVIRONMENT

NRME 1000: Environmental Science

Three credits. An introduction to basic concepts and areas of environmental concern and how these problems can be effectively addressed. Topics include human population; ecological principles; conservation of biological resources; biodiversity; croplands, rangelands, forestlands; soil and water conservation; pollution and water management; and wildlife and fisheries conservation.

PHYSICS

PHYS 1201Q: General Physics I

Four credits. Three class periods and one 3-hour laboratory period. Prerequisite: MATH 1060 or 1110 or 1120 or passing score on the Calculus Placement Survey or equivalent. PHYS 1201 not open for credit to students who have passed PHYS 1401, 1501 or 1601. PHYS 1202 not open for credit to students who have passed PHYS 1402, 1502 or 1602. PHYS 1201 required for PHYS 1202.

Basic facts and principles of physics. The laboratory offers fundamental training in precise measurements.

PHYS 1202Q: General Physics II

Four credits. Three class periods and one 3-hour laboratory period. Prerequisite: MATH 1060 or 1110 or 1120 or passing score on the Calculus Placement Survey or equivalent. PHYS 1201 not open for credit to students who have passed PHYS 1401, 1501 or 1601. PHYS 1202 not open for credit to students who have passed PHYS 1402, 1502 or 1602. PHYS 1201 required for PHYS 1202.

Basic facts and principles of physics. The laboratory offers fundamental training in precise measurements.

PHYS 1401Q: General Physics With Calculus

Four credits. Three class periods and one 3-hour laboratory period. Recommended preparation for PHYS 1401: MATH 1121 or 1131. Prerequisite for PHYS 1402: PHYS 1401. Recommended preparation for PHYS 1402: MATH 1122 or 1132. PHYS 1401 is not open for credit to students who have passed PHYS 1501 or 1601. PHYS 1402 not open for credit to students who have passed PHYS 1502 or 1602. PHYS 1401 may be taken for not more than 2 credits, with the permission of the instructor, by students who have received credits for PHYS 1201. PHYS 1402 may be taken for not more than 2 credits, with the permission of the instructor, by students who have received credit for PHYS 1202.

Quantitative study of the basic facts and principles of physics. The laboratory offers fundamental training in physical measurements. Recommended for students planning to apply for admission to medical, dental or veterinary schools and also recommended for science majors for whom a one year introductory physics course is adequate.

PLANT SCIENCE & LANDSCAPE ARCHITECTURE

HORT 1110: Fundamentals of Horticulture

Three credits. *Salsedo* Science and practice of horticultural plant propagation and culture. Basic concepts of plant structure, growth and function. Integrated pest management. Impact of new technology. Horticulture and the environment.

HORT 2520: Floral Art

Two credits. The study of flower arrangement as an art form with emphasis on historical background, artistic principles, color harmony and care of perishable media. Individual expression is encouraged in the creation of floral composition.

POLITICAL SCIENCE

POLS 1202: Introduction to Comparative Politics

Three credits. A survey of institutions, politics, and ideologies in democratic and non-democratic states.

POLS 1402: Introduction to International Relations

Three credits. The nature and problems of international politics.

POLS 1602: Introduction to American Politics

Three credits. Analysis of the organization and operation of the American political system.

SPANISH

SPAN 3177: Composition & Reading for Spanish Speakers

Three credits. Prerequisite: Consent of instructor.

Grammar, written composition, and readings for speakers of Spanish with little or no formal training. Emphasis is on Puerto Rican literature.

SPAN 3178: Intermediate Spanish Composition

Three credits. Prerequisite: SPAN 1004 or three or more years of Spanish in high school.

This course provides a thorough review of grammar and methodical practice in composition leading to command of practical idioms and vocabulary.

SPAN 3179: Spanish Conversation: Cultural Topics

Three credits. Recommended preparation: SPAN 3178 or instructor consent. In-depth development of speaking skills through cultural readings, group discussions and oral presentations on selected topics concerning the Spanish-speaking world.

STATISTICS

STAT 1100Q: Elementary Concepts of Statistics

Four credits. Recommended Preparation: MATH 1010 or the equivalent. Three class periods and one discussion period.

A standard approach to statistical analysis primarily for students of business and economics; elementary probability, sampling distributions, normal theory estimation and hypothesis testing, regression and correlation, exploratory data analysis. Learning to do statistical analysis on a personal computer is an integral part of the course.