



INSTITUTE OF MARINE AND ENVIRONMENTAL STUDIES



ENVIRONMENTAL SCIENCE TECHNOLOGY PROGRAM—SAMPLE PROGRAM OF STUDY

*Program Specific Course (Note that some are taught only during a specific semester)

First Year

- **1st Semester (Fall)**

ENC1101 **College Composition (3)**

Designed to develop skills in expressive, expository and persuasive writing, theme construction and style. This course contributes to satisfying the Gordon Rule (State Rule 6A-10.030) writing requirement.

MAC1105 **College Algebra (3)**

Topics include: Polynomial and rational equations and inequalities, graphs of functions, rate of change, transformations, extreme values, modeling, combining functions, one-to-one and inverse functions, exponential functions, logarithmic functions, laws of logarithms, exponential and logarithmic equations, modeling, systems of equations, linear systems in three variables, nonlinear systems of equations, and linear and nonlinear systems of inequalities. **Pre-Reqs: MAT1033**

CHM1045/L **General College Chemistry/Lab (4)**

Fundamental laws and theories of chemistry and related laboratory experiments. Designed for students majoring in science. Three-hour lecture, three-hour laboratory. **Co-Reqs: ENC1101 AND MAC1105 OR MAP2302 OR MAC1114 OR MAC2312 OR STA2023 OR MAC1140 OR MAC2311 OR MAC2313 OR MAC2233;** **Pre-Reqs: CHM1025; Conc-Reqs: CHM1045L**

***GIS2040/L** **Geographic Information Systems (3)**

This course introduces the hardware and software components of a geographic information system (GIS) and reviews GIS applications. Topics include data structures and basic functions, methods of data capture and sources of data, and the nature and characteristics of spatial data and objects. **(Taught in Fall Only)**

- **2nd Semester (Spring)**

BSC1010/L **General Biology I/Lab (4)**

Basic principles, which apply to the nature of plant and animal cells, including metabolism, reproduction, protein synthesis and genetics. **Co-Reqs: ENC1101 AND MAT1033 OR MAC1105 OR STA2023**

OCE1001 Introduction to Oceanography (3)

An introduction to physical oceanography, including geology and hydrology of the world's ocean basins and the coupling effects of the ocean and atmosphere. **Co-Req: ENC1101**

***PHY1020 Energy and its Environmental Effects (3)**

This course is a survey course designed to introduce basic physics concepts and applications, with emphasis placed on energy and the environment. **Pre-Reqs: MAC1105 (Taught in Spring only)**

BOT2150 Native Plants of Central Florida (3)

This course will explore plants native to Central Florida including those in the coastal regions and inland wetlands and their interaction with the environment. **Pre-Reqs: BSC1010/L (Taught in Spring only)**

- ***Summer Semester***

SPC2608 Oral Communications/Research/Presentation Skills (3)

Basic principles of speech communication, including practice with various types and methods of oral expression. **Pre-Reqs: ENC1101**

STA2023 Elementary Statistics (3)

Topics include: A survey of descriptive statistics and graphs, probability, random variables, confidence intervals, hypothesis testing, sampling, types of distributions, correlation and regression, and statistical applications. **Pre-Reqs: MAC1105 OR MGF2106**

ECO2013 Principles of Macro Economics (3)

An introduction to the fundamental principles and concepts of the U.S. national economy, including supply and demand analysis, national income accounting, economic growth, fiscal and monetary policy, business cycle theories and international trade. This course contributes to satisfying the Gordon Rule writing requirement. **Co-reqs ENC1101**

Humanities Elective Core (3)

Second Year

- ***1st Semester (Fall)***

***EVR2001/L Environmental Science/Lab* (4)**

This is an introductory lecture course linking the human and physical/biological worlds. The course will help students to develop an understanding of population and resource interactions. **Pre-Reqs: BSC1010/L AND CHM1045/L AND MAC1105 (Lab is taught in Fall Only; Lab requires separate enrollment and permission of instructor)**

GLY2010/L Physical Geology/Lab (4)

Detailed study of the materials comprising the earth's crust and interior and the forces acting to change its surface; the origin of continents and ocean basins in light of recent geologic research. **Co-Reqs: ENC1101 AND STA2023 OR MAC1105 Pre-Reqs: MAT1033 (Taught Fall Only)**

MET2010 Meteorology (3)

An introduction to the fundamentals of weather and climate. Topics include temperature, humidity, clouds, precipitation, air masses, fronts, storms, air pollution and climate. Emphasis is on how these processes take place and their results. **Co-Reqs: MAT1033 OR MAC1105 OR STA2023 AND ENC1101**

***PCB2033/L Introduction to Ecology/Lab (4)**

This course explores the natural history, evolution and adaptation of fauna and flora to the environment with special emphasis on ecosystems of East Central Florida. The laboratory portion will stress wetlands ecology utilizing field techniques of sampling, identification, and delineation. **Pre-Reqs: BSC1010/L AND MAC1105 AND STA2023 (Taught Fall Only)**

- **2nd Semester (Spring)**

***OCE2013/L Aquatic Environmental Science/Lab (4)**

This course is organized around the geochemistry of Earth's hydrologic cycle with an emphasis on the principal constituents dissolved in and transported by natural waters. The course is built around field trip(s) and lab work during which students will obtain water quality data from local aquatic environments and create technical reports and presentations based on their data. **Pre-Reqs: CHM1045/L AND OCE1001 AND STA2023 AND MAC1105 (Taught Spring Only)**

GEO2420 Cultural Geography (3)

A descriptive study of the location and distribution of people in the world and their cultural characteristics, including: language, religion, and how people use resources and earn their livings.

***EVR2933 Environmental Seminar (1)**

This course requires that students create a peer-reviewed presentation synthesizing all learned material, sampling methods, analytical techniques, and data analysis as well as experiences gained via their Environmental Internship position. **Co-Reqs: EVR2943 (Taught Spring only)**

***EVR2943 Environmental Internship (3)**

This course provides students with meaningful work experience in the field of environmental science. Students may participate in field and laboratory exercises as determined by their assigned employers. **Co-Reqs: PCB2033/L AND EVR2933 Pre-Reqs: OCE2013/L (Taught Spring only)**

TOTAL.....64 CREDIT HOURS

Please contact Dr. Raymond Emmett for advising and further information.

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