



CATALOG YEAR 2011
(Please use separate form for each add/change)

COLLEGE/SCHOOL/SECTION: College of Arts and Sciences

Course: Add: Delete: Note: Approved for Core by
(check all that apply) Number Core Curriculum Committee,
Title 3/4/11.
SCH
Description
Prerequisite
New course will be part of major ENSC minor ENSC as a required X
or elective course
New course will introduce X , reinforce , or apply concepts

If new, provide Course Prefix, Number, Title, **Measurable** Student Learning Outcomes, SCH Value, Description, prerequisite, and lecture/lab hours if applicable. If in current online catalog, provide change and attach text with changes in red and provide a brief justification.

Program: Delete: Add: Change: Attach new/changed Program of Study description and 4-year plan. If in current catalog, provide change and attach page with changes in red.

Minor: Add: Delete: Change: Attach new/changed minor. If in current catalog, provide change and attach page with changes in red.

Faculty: Add: Delete: Change: Attach new/changed faculty entry. If in current catalog, provide change and attach page with changes in red.

College Introductory Pages: Add information: Change information:
Attach new/changed information. If in current catalog, provide change and attach page with changes in red.

Other: Add information: Change information: Attach new/changed information. If in current catalog, provide change and attach page with changes in red.

Add ENSC to options in Natural Science component of Core.

APPENDIX A Core Curriculum and Optional Course Information

COMPONENT AREA	COURSE OPTIONS	SCH
Natural Science**	ASTR, BIOL, CHEM, ENSC , EPSC, GEOL or PHYS	8

COURSE SELECTIONS TO FULFILL CORE OPTIONS

NATURAL SCIENCE
ENSC 1301/1101

Introduction to Environmental Systems/ Introduction to
Environmental Systems Laboratory

Approvals:

Signature

Date

Chair
Department Curriculum Committee

Chair
Department

Chair
College Curriculum Committee

Dean

03/01/10

ENSC 1301
Introduction to Environmental Systems

I. Course Description: An introductory course for majors and non-majors that applies the principles of the scientific method and critical thinking to environmental issues through a multidisciplinary approach. Students will gain an understanding of biotic interactions in environmental systems and the human impact as it relates to public policy and natural resource use. The course will focus on environmental sustainability and the ecological principles essential to understanding processes in environmental systems. This is a prerequisite course for Environmental Science (ENSC/BIOL 3401) and must be taken concurrently with the laboratory course ENSC 1101.

II. Learning Outcomes

Students will be able to:

- Relate ecological principles to environmental systems.
- Interpret the human impact on biological processes in environmental systems.
- Identify environmentally sustainable solutions to environmental problems.

III. TEXTBOOK

- *Miller, G.T. and S. Spoolman. 2012. Living in the Environment: Principles, Connections, and Solutions, 17th edition. ISBN-10:0538735341*

IV. INSTRUCTIONAL ACTIVITIES AND METHODS

- The lectures will be available online but attendance is required to receive supplementary material and to participate in class activities. The course will be taught by PowerPoint, videos, and discussions.

Exams (4)	60%
Final	20%
Class Activities	10%
Group Presentation	10%

Students will present an assessment of an environmental issue and possible solutions as a group presentation (at least 3 students). ***The Final Exam is mandatory and cumulative.***

INTRODUCTION TO ENVIRONMENTAL SYSTEMS

TENTATIVE LECTURE AND EXAM SCHEDULE

WEEK	TOPIC	REQUIRED READING
1	Introduction & Procedure, Environmental Problems, Their Causes and Sustainability Environmental Problems, Their Causes and Sustainability	Chapter 1
2	Science, Systems, Matter, & Energy	Chapter 2
3	Ecosystems: What are they and how do they work? EXAM #1 Group Presentations	Chapter 3
4	Evolution and Biodiversity Biodiversity, Species Interactions and Population Control	Chapter 4-5
5	The Human Population and its Impact Climate and Biodiversity	Chapter 6-7
6	Biodiversity Discussion and Review EXAM #2 Group Presentations	
7	Aquatic Biodiversity Sustaining Biodiversity: The Species Approach	Chapter 8-9
8	Sustaining Terrestrial Biodiversity: The Ecosystem Approach Sustaining Aquatic Biodiversity	Chapter 10-11
9	Sustainability of Biodiversity & Review EXAM #3 Group Presentations	
10	Food, Soil, and Pest Management	Chapter 12
11	Environmental Hazards and Human Health Environmental Toxicology and Risk Management	Chapter 17
12	Climate Disruption and Ozone Depletion Impacts of climate change	Chapter 19
13	EXAM #4 Group Presentations Economics, Environment, and Sustainability	Chapter 23
14	Politics, Environment and Sustainability	Chapter 24
15	Environmental Worldviews, Ethics, and Sustainability and Review Group Presentations	Chapter 25
16	EXAM #5 (FINAL)	