

COURSE SYLLABUS

YEAR COURSE OFFERED: 2016

SEMESTER COURSE OFFERED: SPRING

DEPARTMENT: ENSC (Environmental Science)

COURSE NUMBER: 1302

NAME OF COURSE: Environmental Science II

NAME OF INSTRUCTOR: TBD

The information contained in this class syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Learning Objectives

Upon successful completion of this course, students will be able to

1. Delineate relationships between living and non-living components of biogeochemical systems that comprise the biosphere
2. Understand natural resources and relate environmental problems to man's use of these resources
3. Communicate a practical understanding of the biology, chemistry and physics that relate to environmental quality and the scientific methods used to measure the pertinent parameters
4. Communicate ways of living that minimize environmental problems
5. Work with peers to apply content knowledge in problem solving
6. Effectively communicate solutions and reasoning to classmates and course instructor

Core Objectives (CO)

Environmental Science II addresses the following core objectives to ensure students develop the essential knowledge and skills they need to be successful in college, in a career, in their communities, and in their lives.

- Critical Thinking Skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- Communication Skills - to include effective development, interpretation and expression of ideas through written, oral and visual communication
- Empirical and Quantitative Skills - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
- Team Work - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

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Major Assignments/Exams

The course components below are designed to meet the course objectives.

- **Exams:** there will be three in-class exams during the semester. Exams will consist of multiple choice, short answer and essay questions covering material presented in lectures.
- **Homework assignments:** there will be periodic projects and problem assignments that will support the material being presented in class.

Learning Outcomes	CO	Assessment Methods	Criteria/Targets
1. Delineate relationships between living and non-living components of biogeochemical systems that comprise the biosphere.	CT	Pre- and post-test instruments will be used to track student success in mastering the learning outcomes.	≥75% of students will demonstrate >20% improvement between pre-test scores at beginning of course and post-test scores at the end.
2. Understand natural resources and relate environmental problems to man's use of these resources.	CT	Quizzes and exams, with questions directed toward specific topics embedded within each exercise to evaluate specific sub-objectives.	≥70% of students will answer the target questions correctly.
3. Communicate a practical understanding of the biology, chemistry and physics that relate to environmental quality and the scientific methods used to measure the pertinent parameters.	CT	Quizzes and exams, with questions directed toward specific topics embedded within each exercise to evaluate specific sub-objectives.	≥70% of students will answer the target questions correctly.
4. Communicate ways of living that minimize environmental problems.	CT, COM	Pre- and post-test instruments will be used to track student success in mastering the learning outcomes.	≥75% of students will demonstrate >20% improvement between pre-test scores at beginning of course and post-test scores at the end.
5. Work with peers to apply content knowledge in problem solving.	EQS, TW, COM	Problem sets related to each course module will be completed within student work groups.	≥75% of students will complete problem sets with correct solutions within their groups.

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6. Effectively communicate solutions and reasoning to classmates and course instructor.	COM	Short written and oral reports pertaining to class modules.	≥75% of students will complete and share written and oral reports on assigned topics with each class module.
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Required Reading

Miller, G.T., Jr and S. Spoolman. 2013. Environmental Science, 14th ed. Cengage Learning.

Recommended Reading

N/A

List of discussion/lecture topics

- Review of major concepts covered in ENSC 1301
- Food, soil resources and pests
- Water resources and water pollution
- Global and nonrenewable resources
- Energy
- Air pollution
- Solid and hazardous wastes
- Environmental economics