

COURSE SYLLABUS

YEAR COURSE OFFERED: 2015

SEMESTER COURSE OFFERED: FALL

DEPARTMENT: ENSC (Environmental Science)

COURSE NUMBER: 1101

NAME OF COURSE: Environmental Science I Laboratory

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. Record and relate observations from nature
2. Collect and analyze field data and write reports
3. Work with peers to apply content knowledge in problem solving
4. Effectively communicate solutions and reasoning to classmates and course instructor

Core Objectives (CO)

Environmental Science I Laboratory 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.

Major Assignments/Exams

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

- **Quizzes:** pre-field/laboratory quizzes will be given prior to each experiment during the semester; questions will be multiple choice, short answer or essay and will cover material important to understanding the laboratory exercises

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- **Laboratory reports:** written summaries of each field/laboratory exercise, including the objectives, hypotheses, experimental design, methods, data collected, analysis of results, and discussion/conclusion

Learning Outcomes	CO	Assessment Methods	Criteria/Targets
1. Record and relate observations from nature.	CT, COM,EQS	Pre- and post-test instruments will be used to track student success in mastering observation techniques and journaling observations.	≥75% of students will demonstrate >20% improvement between pre-test scores at beginning of course and post-test scores at the end.
2. Collect and analyze field data and write reports.	EQS, COM	Pre-field/lab quizzes and post-field/lab analysis and reports	≥70% of students will correctly answer >70% of the questions on the pre-field/lab quizzes; ≥70% of students will correctly analyze and interpret results of field/lab experiments.
3. Work with peers to apply content knowledge in problem solving.	COM, EQS, TW	Field/lab experiments are performed in assigned groups with each group member responsible for a key role	≥75% of students will participate and provide key components to each field/lab exercise of the group.
4. Effectively communicate solutions and reasoning to classmates and course instructor.	COM	Peer assessment of field/laboratory exercises and analyses	≥75% of students will complete and present field/lab reports on each experiment.

Required Reading

Laboratory manual TBD

Recommended Reading

N/A

List of discussion/lecture topics

- Lab and field orientation, scientific method, experimental design

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- Ecosystem observations and environmental data collection
- Habitat analysis
- Invertebrate collections
- Field comparisons of area ecosystems