ENV 300 Intro to Environmental Sciences

Course Description: A one semester lecture and laboratory course for students interested in minor concentration in environmental science. The primary purpose of the course is to introduce students to the biological, chemical, political, economic and cultural factors that affect the environment, and the interaction of these factors with the ecosystem concepts of nature.
4.000 Credit hours

Book: Cunningham, W, Cunningham, M, Saigo, B, Environmental Science, A global concern, Ninth edition, McGraw-Hill Higher Education Publishers, 2007

Potential Field Trips: Aquaponics, US Silica Mines, Three Rivers Landfill, Phinnizy Swamp(Southeastern Natural Sciences Academy)

Places to visit on site: Silver Bluff, Par Pond, Human Planet

Sample Syllabus: South Carolina State University

**Environmental Sciences Field Station at Savannah River**

**COURSE SYLLABUS**

**Summer Session I 2015 8am-4pm M, W, F**

*(Instructor to announce daily dorm departure times)*

**Instructor’s Name: Warner Ithier-Guzman, Ph.D.**

**College:** Science, Mathematics and Engineering Technology

**Department:** Biological & Physical Sciences

**Course Title & Number: ENV300: INTRODUCTION TO ENVIRONMENTAL**

 **SCIENCE**

**Instructor’s Office: Pacer Commons- 201**

**Instructor’s Office Tel.: NONE**

**Office Hours: Daily after class until 9:00PM**

**Email Address: warner.ithier@gmail.com**

**Classroom: SRS**

**Required Textbook: Environmental Science, 9TH EDITION By William Cunningham and Mary Cunningham**

**I. COURSE DESCRIPTION**

***ENV 300 – Introduction to Environmental Science* 4(3,1)*:*** An introductory one semester or summer course for freshman and sophomore students who are interested in environmental studies, natural and physical sciences, social sciences, agriculture, or engineering. The course will also be ideal for those students and individuals that simply want to broaden their knowledge and/or have more understanding of the environment. Introduction to Environmental Science will expose students to biological, chemical, social, political, cultural, and economic factors that affect the environment. Students will be engaged in hands-on activity of the interaction of these factors with terrestrial and aquatic ecosystems. The course will also explore scientific and social implications of climatic change, global warming, and the effects of anthropogenic pollutants and human population on the environment.

**Prerequisites:**

1. One semester of science or Instructor permission. Sophomore standing

2. All students are required to pass a General Employee Training (GET) multiple choice exam as a condition of retaining your internship. A 3-4 hour training course will precede the exam. Passing the exam is not difficult and only requires your attention during the training course.

**II. COURSE OBJECTIVES**

* To develop an attitude and ability to critically and independently investigate environmental issues.
* To encourage intelligent discussion of current events.
* To develop an appreciation of environmental science, as an evolving product of human endeavor.
* To emphasize the interrelations between man and his environment, using logical thinking.
* To introduce the characteristics of various types of ecological systems.

**III. COURSE COMPETENCIES**

### Upon completion of this course, students should be able to:

### Understand the concept of natural ecosystems and the impact of human activity that causes majortypes of pollution

### Utilize critical thinking skills to solve problems related to the environment and learn how to

### respect the ecological structures on earth.

### Analyze the biological, chemical, and social economic factors that affect the environment.

### Explain the scientific and social implications of climate changes and the effects of

### anthropogenic pollutants and human population growth on the environment.

**IV. EXPECTED MEASURABLE OUTCOMES**

Students will be given individual or group assignments, projects, reports in which they will be required to explain the applications of the techniques and topics learned.

**V. OUTLINE OF COURSE CONTENT (T E N T A T I V E)**

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| --- | --- | --- | --- | --- | --- | --- |
| MTING# | DATE | TOPIC | SUBJECT | HW | DEPARTURE  | FIELD/LAB  |
| 1 | May 29th | **Principles of Understanding our Environment** | Principles of Science | Chapter 1 | 8:00am | **FIELD/LAB**Scientific Method |
| 2\* | June 1st | Matter, Energy and Life | Chapter 3 | 8:00am | **FIELD/LECTURE** |
| 3 | June 3rd | Ecosystems: Energy, Patterns, and Disturbance | Chapter 4-5 | 8:00am | **FIELD TRIP**PAR Pond |
| 4 | June 5th | Population Biology | Chapter 6 | 8:00am | **FIELD** |
| 5 | June 8th | 8:00am | **FIELD/LAB**Phinizy swamp  |
| **EXAM #1** |
| 6\* | June 10th | **People in the Environment** | Human Population | Chapter 7 | 9:00am | **MOVIES**Soylent Green |
| 7 | June 12th | Toxicology | Chapter 8 | 8:00am | **LABORATORY** |
| 8\* | June 15th | **Understanding and Managing Living Systems** | Geology and Resources | Chapter 14 | 9:30 am | **LECTURE/TOUR**1. US Silica Mines (11am)2. POSTER |
| 9 | June 17th | Biodiversity: Preserving Species | Chapter 11 | 8:00am | **LECTURE/FIELD/****LABORATORY** H Area |
| 10 | June 19th | Restoration Ecology | Chapter 13 | 8:00am | **FIELD TRIP**SRS-Prescribed Burning or Restoration |
| **EXAM #2** |
| 11 | June 22nd | **Physical Resources and Environmental Systems** | Municipal Solid Waste |  | 8:00am | **FIELD TRIP**3-Rivers LandfillPoster |
| 12 | June 24th | Water Pollution |  | 8:00am | **FIELD TRIP/LAB**Chemetrics ( water) |

\*: Two-page reflection assignment (single space, font 12, Arial) about what you learned.

**VI. LIBRARY AND INTERNET ASSIGNMENT**

In addition to assignments and projects, students will be given library and internet assignments (if applicable) for which they will be required to submit reports.

**VII. SPECIAL COURSE REQUIREMENTS**

The course is “FIELD ORIENTED”, therefore be prepared to go into the field everyday. Everyday you should bring with you: water, food, a change of clothing, long pants (light weight), field boots, hat, and anything else you think you may need. Course topics will have a supporting field/hands-on activity scheduled by the instructor.

A. Attendance: Attendance is mandatory. Excused absences will be permitted. Leave a message on my phone if an emergency arises. .For an absence to be excused, it **must** be brought to my attention and discussed/approved by me prior to the day in which you are to miss class, with the exception of emergencies. For every unexcused absence, 30 pts will be deducted from your final grade. **BEING LATE/MISSING A DEPARTURE TIME WILL**

**CONSTITUTE AN ABSENCE.** **Absences and tardiness will negatively impact your stipend**.

B. Make-up Exams: Make-up exams will be given only if student presents evidence of being excused officially by instructor. There will be no make up for pop quizzes.

C. Office hours: Instructor will be available during the office hours posted above. However, meeting with the instructor outside of office hours requires an appointment.

D. Equipment Care: Where applicable, each student is expected to exercise extreme caution and care when using any equipment. No piece of equipment is to be operated by any student until he or she has been thoroughly instructed on the equipment’s use.

E. Academic Integrity: All students shall refer to the most current South Carolina State University Handbook for instructions on Academic Integrity.

 The highest standards of academic integrity shall be expected of all students. As such, academic dishonesty is prohibited. Academic dishonesty includes, but is not limited to cheating on examinations, unauthorized collaboration on individual assignments, unauthorized access to examination materials, and plagiarism.

 Plagiarism is defined as the unauthorized use of ideas and/or phrases and representing the same as your own, intentionally or unintentionally. As such, a writer may not use in his or her writing the language, ideas, phrases, or sentences taken verbatim from another’s writing unless due credit is given to the writer by quotation and citation.

 Students found guilty of plagiarism will fail the course. If any student is unsure whether an act may violate integrity policy, please consult with the instructor before engaging in the act.

**VIII. METHOD OF EVALUATION**

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**Requirement Points**

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Two tests (2 @ 100 pts each) 100

Five pop quizzes (5 @ 10 pts each) 50

Six laboratory reports (6 @ 50 pts each) 300

Participation 10

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**Total 760 points**

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**Note: All exam dates are tentative and are subject to change at the instructor’s discretion.**

**IX. GRADING SCALE**

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**Letter/GradeA B C D F** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Score 100-90% 89-80% 79-70% 69-60% < 60%**