ARIZONA WESTERN COLLEGE SYLLABUS

ENV 230 FOUNDATIONS OF ENVIRONMENTAL SCIENCE: HUMANS AND THE ENVIRONMENT
Credit Hours: 4 Lec 3 Lab 2 Rec 1

PREREQUISITE: None

COURSE DESCRIPTION
Introduction to the scientific method of investigating and solving environmental problems. Interdisciplinary analysis of interaction among living and nonliving environmental components, focusing on human interactions. Lab emphasizes critical thinking, experimental design, and problem solving through use of the scientific methods. ENV 230 is intended as a first course for students majoring in the Environmental Sciences.

1. COURSE GOALS
   - 1.1 Introduce students to the principles of Environmental Sciences and to some of the analytical and management methods appropriate to the study of environmental problems
   - 1.2 Understand the impact of humans to the environment and to environmental processes
   - 1.3 Explore the relationship of organisms to the physical and biological environments
   - 1.4 Understand the major steps in the scientific method and be able to use the scientific method to make observations, create questions, form hypotheses, make predictions, conduct a test, and produce results including analysis and interpretation
   - 1.5 Improve scientific writing skills via reading and writing assignments
   - 1.6 Apply scientific thinking and quantitative skills to interpret simple statistical analyses to develop skills for evaluating environmental processes and problems
   - 1.7 Develop presentation skills through formal and informal student presentations to the class as well as involvement in the environmental community
   - 1.8 Have a working knowledge of efforts aimed at reducing human impacts on Earth including sustainability, conservation of our biotic and abiotic resources

2. OUTCOMES
   Upon satisfactory completion of this course, students will be able to:
   - 2.1 describe the nature of scientific inquiry and be able to identify when research, monitoring, or taxonomy is appropriate to apply to environmental issues.
   - 2.2 describe the distribution of Earth's major biomes and the factors affecting their distribution.
   - 2.3 describe the differences and interactions between species, populations, communities, ecosystems, landscapes, ecoregions, and biomes.
   - 2.4 be familiar with the various technical tools used by environmental scientists including GIS, GPS, remote sensing and other mapping tools and describe how these various tools work together to assist environmental biologists.
   - 2.5 explain exponential and logistic population growth, as well as the consequences of population growth arising from these two models.
   - 2.6 describe the various models accounting for how ecosystems respond to both natural and anthropogenic disturbances.
   - 2.7 explain how organisms are adapted to the physical and biological environments, using examples from the scientific literature.
   - 2.8 collect data under field conditions, analyze the data, and present the data verbally and written.
   - 2.9 understand how to read and interpret primary literature.

3. METHODS OF INSTRUCTION

3.1 Lectures
3.2 Laboratory studies
3.3 Slide presentations
3.4 Instructional technology
3.5 Classroom demonstrations
3.6 Recitation and discussion
3.7 Research project
3.8 Internet activities
3.9 Local field trips
3.10 Student presentations

4. LEARNING ACTIVITIES

4.1 Students read assigned course materials, and attend lecture and laboratory meetings and field trips
4.2 Demonstrations, audio-visual materials, films, recitation, discussion, and internet activities utilized as appropriate
4.3 Work cooperatively during laboratory activities and field trips
4.4 Present and interpret scientific data in lab write-ups

5. EVALUATION

5.1 Laboratory exercises – Laboratory points are assigned for written laboratory assignments, along with lab attendance and participation
5.2 Semester exams – Semester exams will cover material from all aspects of the course: lecture, labs, reading, film, field trips, and discussion. Test questions will include a combination of short answer, essay, multiple choice, drawing and labeling diagrams, matching, and vocabulary
5.3 Lab and field trip reports – include write-ups in a modified scientific format
5.4 Final exam – the final exam will be given during final exam week as scheduled in the AWC class schedule and will focus mostly on recently learned material but will also test learning from throughout the semester

6. STUDENT RESPONSIBILITIES

6.1 Under AWC Policy, students are expected to attend every session of class in which they are enrolled.
6.2 If a student is unable to attend the course or must drop the course for any reason, it will be the responsibility of the student to withdraw from the course. Students who are not attending as of the 45th day of the course may be withdrawn by the instructor. If the student does not withdraw from the course and fails to complete the requirements of the course, the student will receive a failing grade.
6.3 Americans with Disabilities Act Accommodations: Arizona Western College provides academic accommodations to students with disabilities through AccessABILITY Resource Services (ARS). ARS provides reasonable and appropriate accommodations to students who have documented disabilities. It is the responsibility of the student to make the ARS Coordinator aware of the need for accommodations in the classroom prior to the beginning of the semester. Students should follow up with their instructors once the semester begins. To make an appointment call the ARS front desk at (928) 344-7674 or ARS Coordinator at (928) 344-7629, in the College Community Center (3C) building, next to Advising.
6.4 Academic Integrity: Any student participating in acts of academic dishonesty—including, but not limited to, copying the work of other students, using unauthorized “crib notes”, plagiarism, stealing tests, or forging an instructor’s signature—will be subject to the procedures and consequences outlined in AWC’s Student Code of Conduct which may include withdrawal from

the course or an F grade.

6.5 Texts and Notebooks: students are required to obtain the class materials for the course.

6.6 Arizona Western College students are expected to attend every class session in which they are enrolled. To comply with Federal Financial Aid regulations (34 CFR 668.21), Arizona Western College (AWC) has established an Attendance Verification process for "No Show" reporting during the first 10 days of each semester.

Students who have enrolled but have never attended class may be issued a "No Show" (NS) grade by the professor or instructor and receive a final grade of "NS" on their official academic record. An NS grade may result in a student losing their federal financial aid.

For online classes, *student attendance in an online class is defined as the following* (FSA Handbook, 2012, 5-90):

- Submitting an academic assignment
- Taking an exam, an interactive tutorial or computer-assisted instruction
- Attending a study group that is assigned by the school
- Participating in an online discussion about academic matters
- Initiating contact with a faculty member to ask a question about the academic subject studied in the course