

ARIZONA WESTERN COLLEGE
SYLLABUS

BIO 109 NATURAL HISTORY OF THE SOUTHWEST

Credit Hours: 4 Lec: 3 Lab: 3

Global Awareness (G)

PREREQUISITE: None

COURSE DESCRIPTION

Study of the common plants and animals of the Southwest including their distribution, adaptation, behavior, and ecology.

1. COURSE GOALS

- 1.1 Become more careful observers of the natural world and to appreciate how a scientific understanding of the natural world can add a useful and interesting perspective to one's life.
- 1.2 Learn the methods of science and gain a global view of ecological processes.

2. OUTCOMES

Upon satisfactory completion of this course, students will be able to:

- 2.1 describe the nature of science and the experimental method, and apply the processes of scientific inquiry to the study of life and the natural world.
- 2.2 describe how the global interaction of solar energy, atmospheric circulation and oceanic circulation controls world climate patterns and how these processes help explain the location of the arid regions of the world.
- 2.3 name and locate on a map: the major desert regions of the world; the major cities, mountains, rivers, and other geographical features of the western states; the Sonoran, Chihuahuan, Mohave, and Great Basin desert regions of North America; and the subdivisions of the Sonoran Desert.
- 2.4 describe the geological and physical processes that shape the landscapes of the western North America
- 2.5 explain the biological significance to differing seasonal patterns of precipitation to the organisms of the Sonoran, Chihuahuan, Mohave, and Great Basin desert regions of North America.
- 2.6 compare the two major subdivisions of the Sonoran Desert that are located in the United States, discussing similarities and differences in their physical environments and living organisms.
- 2.7 describe the concept of mountain life zones and explain why the climate and the biological community type changes with elevation.
- 2.8 recognize and identify common plants and animals of the Southwest, state where they are found in nature, and describe their ecological roles.
- 2.9 visit a variety of local habitats and describe the physical environment of the area and identify the types of living organisms it supports.
- 2.10 describe the types of structural, physiological, and behavioral adaptations organisms have for different types of environments and ways of life.
- 2.11 explain how the process of natural selection can shape these adaptations from generation to generation.
- 2.12 describe and give examples to illustrate ecological principles concerning the interactions between living organisms and the nonliving physical environment, on both a local and a global scale.
- 2.13 describe the way of life of several traditional human cultures in the arid Southwest before European and American colonization.

- 2.14 discuss the scientific and societal issues surrounding environmental dangers to the ecosystems of the Southwest.
 - 2.15 apply the concepts learned in this course to make informed decisions regarding environment ethics and conservation.
3. AWC GENERAL EDUCATION (GE) OUTCOMES
- 3.1 SCIENTIFIC LITERACY
 - Distinguish between a scientific hypothesis and scientific theory
 - Describe the scientific method as a process
 - Utilize data to communicate and apply an understanding of scientific logic and/or quantitative reasoning
 - Analyze an article in popular literature that pertains to science and interpret the findings in terms of public policy, personal experience, or daily life
 - 3.2 CIVIC DISCOURSE
 - Include contemporary subject matter
 - Study of a scientific discipline that includes ecological and environmental interrelationships.
4. METHODS OF INSTRUCTION
- 4.1 Lecture
 - 4.2 Laboratory exercises
 - 4.3 Field trips
 - 4.4 Powerpoint presentations
 - 4.5 Videos
 - 4.6 Classroom demonstrations
 - 4.7 Student discussion
 - 4.8 Research report
 - 4.9 Internet activities
5. LEARNING ACTIVITIES
- 5.1 Students read assigned course material
 - 5.2 Students attend lecture, laboratory and field trip meetings
 - 5.3 Demonstrations, audio-visual materials, films, recitation, and discussion
 - 5.4 Laboratory activities
 - 5.5 Students prepare and present research topic
6. EVALUATION
- 6.1 Lab and field exercises
 - 6.2 Quizzes
 - 6.3 Research paper
 - 6.4 Final exam
7. STUDENT RESPONSIBILITIES
- 7.1 Under AWC Policy, students are expected to attend every session of class in which they are enrolled.
 - 7.2 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.
 - 7.3 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.

- 7.4 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.

- 7.5 Texts and Notebooks: Students are required to obtain the class materials for the course.

- 7.6 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