

ARIZONA WESTERN COLLEGE  
SYLLABUS

AGS 240 ENVIRONMENTAL EFFECTS ON FOOD SAFETY

Credit Hours: 3 Lec 2.5 Lab 1

PREREQUISITE: ENG 101 eligibility, completion of RDG 121 or appropriate reading score

NOTE: Completion of AGS 110 and BIO 205 suggested.

COURSE DESCRIPTION

Potential environmental sources and transport mechanisms of food-borne pathogens. Students will learn how to make informed decisions about the potential effects of local site conditions on food safety. Covers the role of site conditions in pathogen transport such as: livestock proximity, wildlife behavior and habitat, rainfall and irrigation runoff, soil types, slope, aspect, climate, soil erosion and deposition by water and wind, flooding, vegetation and the behavior of pathogens in the environment.

1. COURSE GOALS

- 1.1 Determine food safety objectives.
- 1.2 Describe the behavior of pathogens in the environment.
- 1.3 Develop a specific inventory of local site conditions.
- 1.4 Identify and evaluate potential sources of food-borne pathogens.
- 1.5 Formulate and evaluate management alternatives.

2. OUTCOMES

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

- 2.1 analyze the balance of food safety needs and objectives with resource protection.
- 2.2 evaluate pathogen behavior in soil (moisture and temperature conditions, soil ecology), water (irrigation and flood water), and animals (probability of serving as vector by species, population dynamics).
- 2.3 assess site conditions and risks; e.g. irrigation water storage and distribution systems, flood and runoff hazards, animal intrusion, and wind and dust conditions.
- 2.4 discuss management alternatives for waterways, windbreaks/hedgerows, filter strips, adjacent land uses and buffer options, watershed flood management, and wildlife habitat management.
- 2.5 determine the effects of specific agronomic practices (e.g. organic and conventional farming, composting, hydroponic production) on food safety.

3. METHODS OF INSTRUCTION

- 3.1 Lecture and PowerPoint presentations
- 3.2 Field work and trips
- 3.4 Class discussions
- 3.5 Guest speakers, as appropriate

4. LEARNING ACTIVITIES

- 4.1 Textbook reading assignments
- 4.2 Hands-on laboratory exercises
- 4.3 Field trips to local businesses and laboratories
- 4.4 Internet explorations and activities
- 4.5 Research analysis and critical thinking scenarios
- 4.6 Homework assignments

5. EVALUATION

- 5.1 Exams and quizzes

- 5.2 Participation
- 5.3 Written assignments

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.
- 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