

ARIZONA WESTERN COLLEGE  
SYLLABUS

AGS 102 INTRODUCTION TO PRECISION AGRICULTURE

Credit Hours: 3      Lec 3      Lab 1

PREREQUISITE: None

COURSE DESCRIPTION

This course will give students an introduction to precision agriculture as it relates to field crop production. Students will learn about the agronomy and technology of variable rate technology. The course will highlight the economic and environmental benefits of precision agriculture, as well as examine components of it, including soil and crop variability, global positioning systems, machinery automation, spatial analysis, unoccupied aerial vehicles (UAVs), and satellite imagery. The course will bring together these elements to allow students to evaluate precision agriculture services. This is the foundation course in the Precision Agriculture Certificate.

1. COURSE GOALS

- 1.1. To develop foundational understanding of precision agriculture concepts.

2. OUTCOMES

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

- 2.1. Understand the basis of spatial and temporal variability in crop yield and nutrient supply
- 2.2. Understand the challenges and benefits of utilizing precision agriculture system
- 2.3. Understand the basics of crop and soil sensors as well as data interpretation
- 2.4. Understand methods to develop management zones for variable rate crop input application
- 2.5. Be able to evaluate precision agriculture programs

3. METHODS OF INSTRUCTION

- 3.1. Lectures
- 3.2. Laboratory Activities
- 3.3. Slide presentations
- 3.4. Films/videos
- 3.5. Classroom/Field demonstrations
- 3.6. Research project and report
- 3.7. Internet activities

4. LEARNING ACTIVITIES

- 4.1. Assigned reading material
- 4.2. Field trips
- 4.3. Writing Assignments

5. EVALUATION

- 5.1. Laboratory exercises
- 5.2. Quizzes
- 5.3. Written Papers
- 5.4. Final exam or project

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 Students who are not attending as of the 45th day of the course may be withdrawn by the instructor.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