

ARIZONA WESTERN COLLEGE
SYLLABUS

CSC 215 INTRODUCTION TO ARTIFICIAL INTELLIGENCE

Credit Hours: 4 Lec 3 Lab 2

PREREQUISITE: CSC 127A or EGR 123

COURSE DESCRIPTION

This course is an introduction to artificial intelligence (AI), focusing on machine learning, agents, problem solving, first order logic, classical planning, knowledge representation, natural language processing, perception, robotics, sensors, augmented reality, virtual reality and mixed reality.

1. COURSE GOAL

Students will learn and apply artificial intelligence concepts, enabling students to develop AI software for smart applications, robotics, and augmented, virtual and mixed reality devices.

2. OUTCOMES

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

- 2.1 create AI programs using Lisp, Prolog, Java, Python and other AI capable languages
- 2.2 design algorithms to implement in AI programs
- 2.3 demonstrate knowledge of machine learning, intelligent agents, and logical agents
- 2.4 describe problem solving, classical planning and knowledge representation in AI
- 2.5 implement first order logic in AI problem solving processes
- 2.6 apply natural language processing and perception to robotics and other AI systems
- 2.7 demonstrate sensor planning and programming for smart devices
- 2.8 differentiate between augmented reality, virtual reality and mixed reality
- 2.9 analyze current and future advancements in AI, robotics, expert systems, smart devices, augmented reality, virtual reality, mixed reality and other AI technologies.

3. METHODS OF INSTRUCTION

- 3.1 Lectures and multimedia presentations
- 3.2 In class AI concept and programming demonstrations
- 3.3 Individualized instruction

4. LEARNING ACTIVITIES

- 4.1 Reading assignments
- 4.2 Lectures with multimedia presentations
- 4.3 Classroom AI concept and programming demonstrations
- 4.4 AI lab

5. EVALUATION

- 5.1 Assigned projects
- 5.2 Assigned hands on labs
- 5.3 Written assignments and discussion
- 5.4 Final AI project
- 5.5 Tests

6. STUDENT RESPONSIBILITIES

- 6.1 Under AWC Policy, students are expected to attend every session of class in which they are enrolled.
- 6.2 Classroom Assignments: Students are responsible for work missed and for completing all work before the next class meeting. Students are responsible for participating in all oral drills and for taking all exams.
- 6.3 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.
- 6.4 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.
- 6.5 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.
- 6.6 Textbooks and materials: Students are required to bring notebook or looseleaf book, pens, pencils, dictionaries, and purchase textbook required for class.
- 6.7 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