

ARIZONA WESTERN COLLEGE
SYLLABUS

ACR 201 Air Conditioning and Refrigeration 3

Credit Hours: 3 Lec 1.5 Lab 3

PREREQUISITE: ACR 101

COURSE DESCRIPTION

An advanced course of study into the various types of air conditioning and refrigeration systems in use today. The reasons for the development of various types of systems, including the identification, selection and applications related to these types of systems will be covered. Hands-on experience in maintaining these varied units will be included.

1. COURSE GOAL

Prepare the student to understand and show the ability to service window air conditioners, central air conditioners and to fabricate sheet metal fittings. It also prepares the student to have the knowledge of installation practices and safety procedures.

2. OUTCOMES

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

- 2.1 describe the operation of a window air conditioning system.
- 2.2 diagnose and service a window air conditioning system.
- 2.3 describe the operation of a central conditioning system.
- 2.4 diagnose and service a central conditioning system.
- 2.5 discuss the properties of air.
- 2.6 demonstrate the use of a psychometric chart.
- 2.7 demonstrate a thorough knowledge of all HVAC safety procedures.

3. METHODS OF INSTRUCTION

- 3.1 Lecture
- 3.2 Lab projects
- 3.3 Written and oral exams
- 3.4 Homework assignments
- 3.5 Fieldtrips

4. LEARNING ACTIVITIES

- 4.1 Class and lab policy
- 4.2 Safety practices in the lab and the field
- 4.3 Proper use of technical manuals and service flashes
- 4.4 Drawing and interpreting wiring diagrams
- 4.5 Mastering the proper use of hand and power tools
- 4.6 How to perform as a crew leader or crewmember
- 4.7 Proper handling of equipment

5. EVALUATION

- 5.1 Exams
- 5.2 Assignments
- 5.3 Lab 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45th day of the course may be withdrawn by the instructor.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