

ARIZONA WESTERN COLLEGE
SYLLABUSMAT 106 MATHEMATICS FOR WELDERS
(Equivalent to completing MAT 105 and WLD 101)

Credit Hours: 3 Lec 2 Lab 2

PREREQUISITE: None

COURSE DESCRIPTION

Presentations of the principles and applications of mathematics to real world welding applications. Topics will include basic concepts, operations with signed numbers, exponents, Metric and English systems of measurement, introduction to algebra and use of formulas as they would apply in practical situations. Applications of ratio, proportion, graphing of data, as well as fundamental concepts of geometry and trigonometry will also be discussed.

1. COURSE GOALS

- 1.1 Understand the applications of technical mathematical concepts to students who have minimal backgrounds in mathematics but who will need a general knowledge of mathematical concepts to use in trades and practical job situations.
- 1.2 Provide the student with a foundation on which to build future mathematical growth.

2. OUTCOMES

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

- 2.1 demonstrate problem-solving skills.
- 2.2 compute results for basic technical mathematical operations.
- 2.3 evaluate mathematical formulas related to real-world practice.
- 2.4 demonstrate a useful understanding of the concepts of algebra, geometry and right triangle trigonometry for real world welding applications.
- 2.5 demonstrate a fundamental understanding of the use of graphical data such as line graphs and circle graphs.

3. METHODS OF INSTRUCTION

- 3.1 Lectures
- 3.2 Group discussions and visual aids
- 3.3 Demonstrations

4. LEARNING ACTIVITIES

- 4.1 Solving problems and applications in the areas of technical mathematics
- 4.2 Participation in classroom lectures
- 4.3 Reviewing instructor comments on returned tests.
- 4.4 Projects

5. EVALUATION

- 5.1 Homework assignments
- 5.2 Quizzes
- 5.3 Exams

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 Students who are not attending as of the 45th day of the course may be withdrawn by the instructor.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