

ARIZONA WESTERN COLLEGE
SYLLABUS

PHY 112 COLLEGE PHYSICS II/GE

Credit Hours: 4 Lec 4 Lab 2

PHY 1112

PREREQUISITES: PHY 111

COURSE DESCRIPTION

Introduction to electricity, magnetism, optics, and modern physics.

1. COURSE GOALS

- 1.1. Engage students in collecting, analyzing, and communicating information about physical systems.
- 1.2. Engage students in scientific inquiry by constructing knowledge through observation.
- 1.3. Engage students in developing skills adaptable to changing environments by applying physics principles in a variety of situations.

2. OUTCOMES

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

- 2.1. analyze the behavior of electric and magnetic systems.
- 2.2. analyze ac and dc circuits.
- 2.3. analyze the behavior of light in optical systems.
- 2.4. apply the principle of special relativity to moving systems.
- 2.5. analyze situations involving the wave-particle dual nature of matter.
- 2.6. analyze situations by applying the atomic model of matter.
- 2.7. analyze situations involving stable and unstable atomic nuclei.
- 2.8. collect information about a physical system by observation and measurement.
- 2.9. communicate information about a physical system.

3. AWC GENERAL EDUCATION (GE) CATEGORY & CRITERIA
NATURAL SCIENCES

- How to describe, explain, and predict natural phenomena using scientific, logical, and quantitative reasoning and empirical evidence from observation and experimentation
- The use of experimentation and/or observation to study natural phenomena, using the scientific method
- How to communicate information about the natural world using written, numeric, and/or visual formats; and when possible, how to use computational/simulation programming environments as a method for solving systems and simulating theoretical or experimental data
- How to critically evaluate scientific information, including visual displays and quantitative data

4. METHODS OF INSTRUCTION

- 4.1 Lecture
- 4.2 Demonstrations
- 4.3 Appropriate audio-visual and multi-media aids
- 4.4 Student group activities when applicable
- 4.5 Laboratory exercises

5. LEARNING ACTIVITIES

- 5.1 Laboratory exercises
- 5.2 Group activities

- 5.3 Classroom demonstrations
 - 5.4 Lectures
 - 5.5 Writing Assignments
6. EVALUATION
- 6.1 In-class examinations
 - 6.2 Final examination
 - 6.3 Periodic quizzes
 - 6.4 Laboratory exercises
 - 6.5 Writing assignment
7. STUDENT RESPONSIBILITIES
- 7.1 Under AWC Policy, students are expected to attend every session of class in which they are enrolled.
 - 7.2 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.
 - 7.3 Americans with Disabilities Act Accommodations: Arizona Western College provides academic accommodations to students with disabilities through Accessibility 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.
 - 7.4 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.
 - 7.5 Texts and Notebooks: Students are required to obtain the class materials for the course.
 - 7.6 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