

ARIZONA WESTERN COLLEGE
SYLLABUS

AET 107 Private Pilot Ground School

Credit Hours: 3 Lec 2, Lab 1

PREREQUISITE: None

COURSE DESCRIPTION

Ground school in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate written examination. Includes aerodynamics, airplane systems, airports, airspace, communications, Federal Air Regulations, navigation, airplane performance, flight planning, and flight physiology. Requires passing a written exam similar to the FAA Private Pilot written exam.

1. COURSE GOAL

- Applicable Federal Aviation Regulations of this chapter that relate to private pilot privileges, limitations, and flight operations
- Accident reporting requirements of the National Transportation Safety Board
- Use of the applicable portions of the “Aeronautical Information Manual” and FAA advisory circulars
- Use of aeronautical charts for VFR navigation using pilotage, dead reckoning, and navigation systems
- Radio communication procedures
- Recognition of critical weather situations, and the procurement and use of aeronautical weather reports and forecasts
- Safe and efficient operation of aircraft including collision avoidance, and recognition and avoidance of wake turbulence
- Effects of density altitude on takeoff and climb performance
- Weight and balance computations
- Principles of aerodynamics, powerplants, and aircraft systems
- Stall awareness, spin entry, spins, and spin recovery techniques
- Aeronautical decision making and judgment
- Preflight action

2. OUTCOMES

Upon satisfactory completion of this course, via exam, written essay and projects (14CFR Part 61.105(b)), students will be able to:

2.1 analyze aviation-related scenarios to identify the weather associated with

air masses and fronts, and then apply that analysis to make a risk-based decision about the proposed flight.

- 2.2 assess the weather conditions (provided with excerpts from weather forecast products) along a cross-country route of flight. Using a combination of products, assess the weather forecast's impact to all phases of flight.
- 2.3 identify the segments of a traffic pattern and explain the purpose of standardized patterns. Students will also answer scenario-based questions on pattern operations, pattern entry, and radio procedures, and perform an analysis of potential conflicts between aircraft in the pattern.
- 2.4 explain the importance of precise radio communications, apply their understanding to respond appropriately in different online scenarios, and describe ways to reduce the potential for mishaps related to communications and airport operations.
- 2.5 identify aeronautical chart symbology, identify and explain chart concepts, and analyze chart information for limitations and impacts that may affect notional flights or planning.
- 2.6 analyze flight planning tools and calculations and apply them to a notional planning scenario to determine True Course and distance data for a realistic multi-leg cross country flight.
- 2.7 calculate compass headings and groundspeeds for a multiple-leg flight and then analyze what effect the winds and magnetic field have on the planned flight with regard to fuel and time.
- 2.8 analyze a scenario for aircraft weight and balance, determine changes in a dynamic situation, and make decisions as the pilot-in-command regarding safety of flight.

3. METHODS OF INSTRUCTION

- 3.1 Lecture
- 3.2 Video
- 3.3 Classroom demonstrations
- 3.4 Computer Simulation

4. LEARNING ACTIVITIES

- 4.1 Complete assigned readings
- 4.2 Do hands-on analysis in lab activities
- 4.3 Participate in weekly group discussion boards
- 4.4 Complete weekly critical thinking essays
- 4.5 Participate in examinations

5. EVALUATION

- 5.1 Written exercises
- 5.2 Exams
- 5.3 Final exam (FAA testing format)

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