

AERO 1 Aviation Maintenance Syllabus

Aero 1 is the first of four semesters of coursework designed to provide students with the knowledge, experience, and hands-on skills required to obtain certification by the Federal Aviation Administration (FAA). Successful completion of all four semesters, can lead to Airframe and Powerplant certification by the FAA. Becoming a certified aircraft mechanic is a challenging, sometimes difficult task, yet the rewards can be very satisfying and rewarding.

Class Information: **Aero 1 Fall 2012**, 17.5 Units, Meets in AE5 or Aero Lab

Instructor: Mr. DeArman

Class Hours: **Daily: 7:30 am to 1:20 pm** Lecture: 7:30 – 8:45 Break: 8:45- 8:55
Lecture: 8:55 - 10:10 Break: 10:10 - 10:35
Lab: 10:35- 1:05 Break 1:05-1:20

Holidays: Monday, September 3, 2011 Labor Day
Monday, November 12, 2011 Veteran's Day
Thursday & Friday, November 22-23, 2012 Thanksgiving

Drop Deadlines: August 24 (with refund); August 31 ("W" grade assigned after this date);
October 12 (grade assigned after this date, see catalog)

Final Exam Date: December 10, 2012

Required Texts: Jeppesen A&P Technician General Text Book
Jeppesen A&P Technician Airframe Text Book
AC-43.13-1B Acceptable Methods, Techniques, and Practices
Jeppesen FAR's (Federal Aviation Regulations) current publication
(Note: General/Airframe Written Test Guides and Workbooks are *strongly* recommended.) The questions found in the test guides are also available on the internet at faa.gov. Newer editions of the Airframe text include the workbook problems, but not the test guide questions.

Personal Supplies: Safety Glasses, Breathing Protection, and Hearing Protection are **required** items, and are not "optional." Recommended also are a six inch steel ruler, an extra-fine sharpie, and a calculator (**cell phones may NOT be used during test taking**).

Purpose: The primary purpose of this course is to meet the Federal Aviation Administration requirements for certification as an Airframe and Powerplant Maintenance Technician.

Topics: See attached Reading Assignment and Exam Schedules.

Grading Basis: Because the Aviation Maintenance Technician Program is both a community college curriculum and a Federal Aviation Administration approved curriculum at the same site, two grading systems are used.

The FAA subject scores are computed as follows: A percent score will be used to compute all graded work where possible. Lab projects may also be graded on the basis of airworthiness, safety, ability to follow instructions, and professional approach to each project.

When each subject is completed, the instructor will combine all lecture and lab scores in that subject, and convert it to a percent score. Wherever possible, lecture and lab scores will be weighted equally. This score becomes the FAA Subject Score.

Important Note: Each one of the 44 FAA subject scores must be at or above 70% when completed, to receive credit toward the Airframe and Powerplant Certificate. The College grade has no bearing upon meeting the FAA guidelines.

FAA Subject Grading System:
(Sample calculations)

Lecture	Total possible	Student score
Subject A: Quiz 1	5	3
Subject A: Exam 1	30	25
Lecture subtotal	35	28 80%
Lab		
Subject A: Project 1	50	30
Subject A: Project 2	70	50
Lab Subtotal	120	80 66.7%

To arrive at the FAA subject score, add the lecture and lab percents together, and then divide by two. This will result in a 73.34% (in the preceding example) "FAA" subject score. The Reedley College "final exam" is not factored in, nor has any bearing on this score.

The Reedley College Aero grade is computed differently. Each completed subject score explained above is then "weighted" in proportion to the number of hours of instruction it contains. These weighted scores are then combined with the College final exam, which is always 20% of the final grade. **This score is the College Grade.** The college grade is an average of all work completed in the course, including the final exam.

College Grading System (Sample calculation)

Subjects Taken	Grade	Hours/Subject	Factor
Ground Ops	60%	6 hours	.15
Basic Elect.	80%	34 hours	.85
		40 hours total	

To arrive at the College grade, multiply each subject grade times the factor determined by course length, and add the scores together. For example:

Ground Ops: 60% score times .15 factor = 9.0%

Basic Elect: 50% score times .85 factor = 68.0%

Total of all "weighted" subjects = 77.0%

Then add in the final exam score weighted at 20% of the total score.

Final exam score (sample) = 90%

Formula: (20% X 90%) plus (80% X 77%) = 79.6% "Reedley College" school grade.

The College letter grade scale is as follows:

A = 100-90%, B = 89-80%, C = 79-70%, D = 69-60%, F = 59-0%.

Written and/or Lab Assignments, or unit Tests completed and turned-in two or more weeks after the initial due date, are only eligible to received a maximum of 70% of their original grade! Quizzes missed due to absence, must be taken within two weeks or a zero grade will be given. Missed quizzes or tests are expected to be made up the **next day** of attendance.

Attendance Policy:

One of the single most important factors in determining success in the Aero Program is attendance! Students are expected to meet in the assigned area for roll call in the Aero building no later than 7:30 AM each day. A student missing more than 30 hours in any semester, **may be dropped from that Aero Course.**

LATE ARRIVAL TO CLASS: Since good work habits are needed to become a successful aircraft maintenance technician, **a student arriving late for class more than six times in any eighteen week "course" will be subject to dismissal from that Aero Course.** Students shall report the time missed for taking any unauthorized breaks, or for missing any portion of lecture or lab to the instructor responsible for recording his or her progress for that day.

MAKE-UP TIME: All time missed due to being late or absent in any portion of a subject must be made up within that subject. **It is the student's responsibility to contact the instructor when time was missed, to arrange to make up the time missed, and to verify that time made up is properly logged by that instructor.**

MISSED TIME REPORT: A missed time report form will be maintained for each student by the instructor responsible for lab roll call. Any time missed, and subsequently made up, must be entered on this form by that instructor. The missed time report forms will be accessible for student verification.

1. At the time of absence or late arrival the instructor will mark the student absent, enter the date, indicate whether the time missed was lecture or lab, and identify the subject(s) missed. **It is the responsibility of each student to verify that absences due to late arrival have been changed to actual time missed. If not corrected, each absence becomes six hours time lost. Verification shall be done on the same day of the late arrival.**

2. Students must report any time missed on the *Time Make-up Form* and submit it the appropriate instructor at the end of the class session. It is the student's responsibility to complete the time make-up form. At the time of make-up, the instructor will enter the date the work was made up and initial. At the end of each nine-week block of instruction the time missed and the time made up will be posted in the master records. All work must be made up in order to qualify for the A & P Mechanic certificate.

Other Issues:

1. Please do not enter the Classroom while another class is in progress.
2. No food or drink is allowed in the Aero classrooms or lab.
3. The use of any form of tobacco is only permitted outside at the South entrance to the Aero building. Please help keep the area clean.
4. Always maintain an attitude of **safety** in the lab.
5. Always receive proper training before operating equipment that you do not know how to use properly.
6. Safety glasses must be worn in all areas required.
7. No open-toed shoes are to be worn in the lab.
8. If you have special needs as addressed by the Americans with Disabilities Act (ADA), please notify me immediately. Reasonable efforts will be made to accommodate your special needs.
9. ANY assignment turned in LATE (two weeks after original due date), will receive a maximum grade of 70%.
10. Cell phones may not be used as calculators, or for any other reason, during test taking. You need to bring a calculator to class!

Lecture Schedule, Reading Assignments, and Exam Schedule

Mr. DeArman

Aero 01, First Half of Fall 2012

Note: Exams will usually be given the day after the last lecture for a given section. Quizzes may be given at any time. Exam and Quiz questions will be selected from the reading assignment and from class lecture.

Ground Operation and Servicing

DATE	TOPIC	TEXT
August 13-17	Shop Safety Flight Line Safety Servicing Aircraft	A&P General, Ch. 13, page 13-1 thru 13-35

Weight & Balance

DATE DUE	TOPIC	TEXT
August 20-28	Weighing Procedures, Calculating the CG, Shifting the CG, Helicopter Weight and Balance	A&P General, Ch. 6, page 6-1 to 6-26

Fluid Lines & Fittings

DATE DUE	TOPIC	TEXT
Aug 29-Sept 1	Rigid Fluid Lines Flexible Fluid Lines	A&P General, Ch. 10, pages 10-1 to 10-20

Cleaning and Corrosion control

DATE DUE	TOPIC	TEXT
September 4-10	Aircraft Cleaning Types of Corrosion Corrosion Detection Treatment of Corrosion	A&P General, Ch. 12, pages 12-1 to 12-31

Physics

DATE DUE	TOPIC	TEXT
Sept 11-Oct 5	Simple Machines Sound, Fluid, and Heat Dynamics Basic Aerodynamics Aircraft Structures Theory of Flight	A&P General, Ch. 2, pages 2-1 to 2-67

Aircraft Coverings

DATE DUE	TOPIC	TEXT
October 8-10	Fabric Covering Processes Inspection and Repair of Fabric Covering	A&P Airframe, Ch. 5, pages 5-1 to 5-29

Wood Structures

DATE DUE	TOPIC	TEXT
October 10-12	Aircraft Wood Structures	A&P Airframe, Ch. 3, pages 3-1 to 3-21