Reedley College

Aviation Maintenance Technology

Syllabus

**AMT 10 (50012, 50014)                                             Aviation General Maintenance A                                                   Fall 2022**

**Instructors:**    Jason Asman                         e-mail: jason.asman@reedleycollege.edu                 Phone: 559-494-3000  x.3243

**Office Hours:**  M, T, TH, F - 2:30pm - 3:30pm           **Office Location:** Aero 8

**Instructors:** Ray Winton                            e-mail: ray.winton@reedleycollege.edu                     Phone: 559-494-3000  x.3243

**Class Location:**Meets in Aero 5                                 **Daily Schedule:**   Lecture: 8:00am –  10:50am, Lab: 11:30am – 2:20pm

**Holidays**:  (Mon) September 5th - Labor Day (no classes held, campus closed)

(Fri) November 11th - Veterans Day (no classes held, campus open)

(Thur, Fri) November 24th-25th - Thanksgiving holiday (no classes held, campus closed)

**Important Dates:**    Short term classes, first nine weeks:  August 8 - October 7

**Drop Deadline:    Last day to drop with “W”** - September 2nd.                **Last date to drop for a refund**. – August 11th

**Course Content:**This combination lecture/lab course will cover topics such as: The fundamentals of electricity and electronics, aircraft weight and balance, physics for aviation, aircraft ground operations and servicing, human factors in aviation maintenance, and mathematics.

**Course Objectives:**

1. Measure voltage, current, and resistance in an aircraft electrical circuit.
2. Troubleshoot aircraft electrical short and open circuits.
3. Explain laws of physics as they apply to aircraft.
4. Apply technical math skills and demonstrate them in practical applications.
5. Locate, interpret and apply weight & balance information.
6. Operate an aircraft engine from starting procedures, through its normal operating range, and perform a complete shutdown.
7. Identify and explain the principles of the theory of flight.

**Course Outcomes:**Upon completion of this course, students will be able to:

1. Safely evaluate an aircraft electrical system to determine if the system is functioning properly and to identify faults within the system and make repairs as necessary.
2. Perform weight and balance checks on an aircraft to determine if it is loaded and configured in a manner that is safe for flight and to install, remove, or relocate equipment or ballast to correct for out of balance conditions.
3. Safely and effectively operate and service aircraft, engines, and systems on the ground in order to support aircraft maintenance and operations.

**Canceled Class Notification:**If an AMT class has to be cancelled, a cancellation notice will be placed on the classroom door. In addition, the cancelled class will be posted on the Reedley College website and you will be notified through either email or Canvas.

**Student Handbook:** The official AMT Program Student Handbook is a great resource that contains lots of valuable information a student may need during their time here at Reedley College. You can view this handbook online or download it as a .pdf file from the Student Resource Module in Canvas or using the link below.

[$WIKI\_REFERENCE$/pages/rc-amt-student-handbook](https://scccd.instructure.com/courses/88489/pages/rc-amt-student-handbook)

**Final Exam:**A final exam will be given at the end of this course. **Students must score 70% or higher on this exam to pass this course.** If a student scores less than 70% on the final exam, that student will receive a failing grade (F) for the course regardless of any other points previously earned.  Final exam scores of 70% or higher will account for 20% of the final course grade**.** The Final Exam is closed-book in that students may not refer to any document during the test. All answers must come from memory. You are required to take the final exam; however the final exam will not affect your FAA grade. Your final exam will be on October 7th.

**Required Textbooks:** Number 1 & 2 are free to download in .pdf format here. [https://www.faa.gov/regulations\_policies/handbooks\_manuals/ (Links to an external site.)](https://www.faa.gov/regulations_policies/handbooks_manuals/)

1. U.S. Department of Transportation, Federal Aviation Administration. *Airframe & Powerplant Mechanics****General****Handbook*, FAA-H-8083-30ATB ed. ISBN: 9781941144602, Tabernash, CO: Aircraft Technical Book Company, 2018
2. U.S. Dept. of Transportation, Federal Aviation Administration.. ***Advisory Circular AC43.13-1B/2B****, Acceptable Methods, Techniques, and Practices - Aircraft Inspection and Repair*, ISBN: 9780977489695, Aircraft Technical Book Co., 2009
3. U.S Dept. of Transportation from Title 14 of the Code of Federal Regulation (14 CFR). ***FAR/AMT*, 2020** ed., Aviation Supplies & Academics ,IBN-13:9781619548084

**Additional Recommended Textbooks:**  Note: Airframe & Powerplant Mechanics Test Guides are *strongly*recommended.

1. Aircraft Technical Book Company. *Airframe & Powerplant Mechanics General Test Guide*, 1st. ed. Tabernash, CO: Aircraft Technical Book Company, 2018 ISBN: 9781941144626
2. Wild, T., Leasure, M.. *Aviation Maintenance Technician General Workbook*, ed. Tabernash, CO: Aircraft Technical Book Company, 2018 ISBN: 9781941144633

**Instructor Meetings:** You may need to meet with your instructor during the semester for various reasons. Instructors hold office hours for this purpose and welcome you to meet with them at that time. Your instructor’s office hours are posted outside of the office on the door and on Canvas. Be aware that this can be a busy time and I advise you to schedule an appointment. Virtual office hours will be held via Zoom. The Zoom link can be found at the top of this document.

**COVID 19 Safety Practices:**

SARS-CoV-2 (novel coronavirus) is present in our region and is being transmitted via community and person-to-person spread. The campuses and the State Center Community College District are taking precautionary measures in accordance with public health officials in an effort to protect the health and safety of our students and employees

Do you have any of these symptoms that are not caused by another medical condition? (Fever or Chills, Cough, Shortness of breath or difficulty breathing, Fatigue, Muscle or body aches, Headache, Recent loss of taste or smell, Sore throat, Congestion, Nausea or vomiting, Diarrhea)

Does anyone that resides in your home have any of these symptoms that are not caused by another medical condition? (Fever or Chills, Cough, Shortness of breath or difficulty breathing, Fatigue, Muscle or body aches, Headache, Recent loss of taste or smell, Sore throat, Congestion, Nausea or vomiting, Diarrhea)

Within the last 10 days, have you been exposed to anyone who have tested positive for COVID-19? (Exposure is defined as being within 6 feet for more than 15 minutes)

Within the last 10 days, have you tested positive for COVID-19?

If you answer NO to questions 1, 2, 3, and 4, you may report to class or access other designated service areas on campus.
If you have had close contact with a suspected or known COVID-19 patient (see question 3) then notify your instructor or campus health center and stay home and self-quarantine for 14 days. Notify any close contacts to do the same.
If you have a fever or any signs or symptoms of illness or have tested positive for COVID-19 (questions 1 and 2), notify your instructor or campus health center and stay home and self-Isolate for 10 days after onset of symptoms and until 24 hours after significant improvement of symptoms or fever without the use of fever-reducing medication before resuming normal activity. If you have tested positive for COVID-19 and are symptom free (asymptomatic), the 10-day self-isolation begins on the day you were tested. You must notify your close contacts to quarantine for 14 days. If public health officials update isolation guidelines, you will be expected to comply with the updated guidelines.

Additionally, you must agree and adhere to the following:
•    Having your temperature taken by a college employee using a touchless thermometer, whenever you are requested to do so.
•    Washing your hands with soap and water or alcohol-based sanitizer before you start class and frequently throughout the day.
•    When using soap and water, lather and scrub your hands for at least 20 seconds.
•    When using an alcohol-based hand sanitizer, make sure it is 60% or greater alcohol and rub it into your hands for approximately 20 seconds until your hands feel dry.
•    Wearing a facial covering at all times while on campus, unless you have a medical condition or disability that precludes you from wearing a facial covering. If you need an exemption from this requirement, please contact your campus health center.
•    Notifying your instructor, service area staff member or campus health center and going home if you start to feel ill and/or have any COVID-19 symptoms while on campus.

**Student Education Plan:**A Student Education Plan (SEP) is a plan detailing the coursework that is required to meet Reedley College certificate, graduation, or transfer requirements. An SEP must be completed by a Reedley College counselor. It will note the classes you have completed and the classes you still need to take. The SEP should include courses you have taken at other schools. You will be encouraged to complete an SEP sometime during this semester if you have not already completed one.

**Personal Supplies:**You are responsible for your own personal protective equipment (PPE).**Safety glasses and hearing protection will be required in the Aeronautics building lab**. Safety glasses will be worn at all times during the lab sessions. You will be required to wear hearing protection while operating or in close proximity to equipment that elevates the sound level. Closed toe shoes are required in the Aeronautics lab. You will need to supply a box or latex or nitrile gloves. A pair of light work gloves is also recommended for occasional use. If you do not have your personal protective equipment with you, you will not be allowed to participate in the lab. We all occasionally forget to wear our PPE (I know I do), so please help each other out and remind each other if you see someone not wearing theirs (including the instructors).

**Uniform Shirts:**You will be given an opportunity to purchase uniform shirts during the first week of class. Students are required to wear the Aeronautics program uniform shirts to class each day. If you fail to wear the correct uniform, you will be asked to leave the class and you will be marked absent until you return to class with the uniform on. Uniform shirts are required after August 29th.

**Locker Room:**Each of the restroom facilities within the Aeronautics building has lockers for use by AMT students. You may use a locker to store PPE, books, projects, etc.  You must provide your own lock and write down your full name, student number, and locker number on the locker assignment sheet kept by the instructor. Any locks found on lockers that have not been assigned will be cut and the contents of that locker with be disposed of. By the end of finals week for each semester, you will need to have your locker emptied and your lock removed. Any locks remaining on lockers will be cut and the contents of that locker with be disposed of.

**Grading Policy:**The AMT program is both a community college and a FAA approved curriculum at the same site, therefore, two grading systems are used. The grade required by the FAA is determined for each of the FAA subjects completed throughout the nine-week term. These scores are calculated independently of each other, then they will be combined at the end of each course and added to your final exam score as the Reedley College grade for that semester. The subject area scores will account for 80% of the semester grade and the final exam will account for the remaining 20%.

**FAA Subject Scores:**A percent score will be used to compute all graded work where possible. Lecture scores will be based on a combination of quiz and test scores, class assignments, and homework assignments. Lab scores will be based on lab projects and a skills test.  This test will contain both oral and practical problems. Lab projects will be graded on many factors including: safety practices, job completion, time management, following directions, and the care of equipment and tools. The instructor will also evaluate your 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.  **You must earn a passing score of 70% or greater in both the lecture and lab portion of each subject area to meet FAA regulations. If a student scores less than 70% in the lecture or lab of any one subject area, that student will receive a failing grade (F) for the course regardless of any other points previously earned.**Wherever possible, lecture and lab scores will be weighted equally.

***The College grade has no bearing upon meeting the FAA guidelines.***

**FAA Subject Grading System: (sample calculations)**

            **Lecture                                 Points Earned                     Points Possible                    Lecture Percentage**

                Quiz 1                                           11                                               15

                Exam 1                                         25                                               30

                Assignment 1                          +  15                                           + 15

                                       51                                               60**85.0%**

**Lab                                        Points Earned                     Points Possible                    Lab Percentage**

Project 1                                        18                                               20

                Project 2                                      16                                               20

                O&P Exam                               +  15                                           + 20

                                       49                                               60**81.7%**

To arrive at the FAA subject score, add the lecture and lab sub totals together, and divide by two. This will result in an 83% FAA subject score. All percentages are rounded off to the nearest whole number.

                **Lecture Percentage**           85.0%                                                                                    **FAA Subject Score**

                **Lab Percentage**             +  81.7%

                                                            166.7%         divided by 2         = 83.35%          **83%**

The College course final exam score is not factored in, nor has any bearing on this FAA score.

To calculate the semester grade for Reedley College, 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 final exam score, which is always 20% of the final grade. This score is the semester college grade.

**College Grading System: (sample calculations)**

                                                **Subject Totals                     Hours per Subject                              Weight Factor**

                                                Subject 1 85%                                10                                          0.2

                                                Subject 2 90%                                25                                          0.5

                                                Subject 3 80%                                15                                          0.3

                                Sub total:                                                        50                                          1.0

To arrive at the College grade, multiply each subject total by the weight factor (determined by subject length), then add the products together. For example:

                                    Subject 1: (85%)  subject total  (X)  weight factor   (0.2)   = 17.0%

                                    Subject 2: (90%)  subject total  (X)  weight factor   (0.5)   = 45.0%

                                    Subject 3: (80%)  subject total  (X)  weight factor   (0.3)   = 24.0%

Total :                                                                                            86.0%

                                Final Exam Score                                                                          98.0%

Multiply the “weighted” total by 80%, then add the final exam score weighted at 20% for the “College” total score.

                        Formula:(86% X 80%)            plus          (98% X 20%)  **= 88.4%**

**Letter Grade scale is as follows:   100%-90% = A,    89%-80% = B,    79%-70% = C,   69% and below = F.**

**Attendance Policy:**Students are expected to meet in the assigned area for roll call no later than 8:00 am each day. **If a student misses 4 days (24 hours) or more in any nine-week course, that student will be dropped from that AMT course.**If a student misses a test due to an absence, the test must be taken the first day the student returns to class. If a quiz or in class assignment is missed, you will not be allowed to make it up unless you provide a doctor’s note. If you arrive late, you must inform the instructor of your arrival immediately so the attendance record can be corrected. A missed time report will be kept for each student by their instructor. All time missed will be logged by your instructor in increments of 1/10th of an hour. Any time missed, and subsequently made up, will be recorded on this form by the instructor. The missed time report forms will be accessible for student verification. Time that has been “made-up” is still counted toward the 15-hour maximum per semester. All time missed due to absences or late arrival must be “made-up” prior to the end of the semester. You will not be allowed to begin the next AMT course until you have corrected your attendance record.

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 6 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 Formand submit it to the appropriate instructor at the end of the class session**. It is the student's responsibility to complete the time make-up form**. After the time is made-up, the instructor will enter the date the work was completed and initial. All work must be made up in order to qualify for the Certificate of Completion needed to take your FAA certification tests to become a licensed A&P Mechanic.

**Student Parking:**Reedley College parking permits are required for all vehicles on the Reedley College campus. Students will park only in designated parking areas. Parking is not allowed anywhere near the Aeronautics Building. You may purchase a parking permit from the cashier in the Student Services building for each semester you attend class. Parking permits cost $30 each. You must display the parking permit in your front windshield or hang it from your rear-view mirror. Any violation of the above rules may result in a ticket.

**Behavioral Standards:**Please do not enter the classroom while another class is in progress. Please respect other persons and their property. Any disrespect to others may result in disciplinary action. Disruptive behavior, inappropriate language, or anything that could be viewed as sexual harassment is not acceptable. The “Student Conduct Standards” outlines behavioral expectations, and explains the process for responding to allegations of student misconduct.  Students who do not comply with the “Student Conduct Standards” are subject to the College disciplinary actions.  The Student Conduct Standards can be found at:  [https://www.reedleycollege.edu/about/about-us/policies-and-procedures/student%20conduct%20standards.html (Links to an external site.)](https://www.reedleycollege.edu/about/about-us/policies-and-procedures/student%20conduct%20standards.html)

No food or drink is allowed in the AMT classrooms or laboratory except in designated areas. The use of any form of tobacco is forbidden on campus. Vaporizers or “vapes” are also forbidden. Always maintain an attitude of safety in the lab. Always receive proper training before operating equipment that you do not know how to use. You are not allowed to use any power tools or equipment unless you have been instructed to do so by your instructor.

**Academic Dishonesty:**Students at Reedley College are entitled to the best education that the college can make available to them. Students, their instructors, and their classmates, share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.

**Federal Aviation Regulation are clear on this matter!**

***FAR 65.18 Written tests: Cheating or other unauthorized conduct.***

***(a)****Except as authorized by the*[*Administrator (Links to an external site.)*](https://www.law.cornell.edu/definitions/index.php?width=840&height=800&iframe=true&def_id=0c265d2e5b0cc0d1944056607ecc5df4&term_occur=999&term_src=Title:14:Chapter:I:Subchapter:D:Part:65:Subpart:A:65.18)*, no*[*person (Links to an external site.)*](https://www.law.cornell.edu/definitions/index.php?width=840&height=800&iframe=true&def_id=24a80ca42ed148d527b7ddad982da95a&term_occur=999&term_src=Title:14:Chapter:I:Subchapter:D:Part:65:Subpart:A:65.18)*may -*

***(1)****Copy, or intentionally remove, a written test under this part;*

***(2)****Give to another, or receive from another, any part or copy of that test;*

***(3)****Give help on that test to, or receive help on that test from, any*[*person (Links to an external site.)*](https://www.law.cornell.edu/definitions/index.php?width=840&height=800&iframe=true&def_id=24a80ca42ed148d527b7ddad982da95a&term_occur=999&term_src=Title:14:Chapter:I:Subchapter:D:Part:65:Subpart:A:65.18)*during the period that test is being given;*

***(4)****Take any part of that test in behalf of another*[*person (Links to an external site.)*](https://www.law.cornell.edu/definitions/index.php?width=840&height=800&iframe=true&def_id=24a80ca42ed148d527b7ddad982da95a&term_occur=999&term_src=Title:14:Chapter:I:Subchapter:D:Part:65:Subpart:A:65.18)*;*

***(5)****Use any material or aid during the period that test is being given; or*

***(6)****Intentionally cause, assist, or participate in any act prohibited by this paragraph.*

***(b)****No*[*person (Links to an external site.)*](https://www.law.cornell.edu/definitions/index.php?width=840&height=800&iframe=true&def_id=24a80ca42ed148d527b7ddad982da95a&term_occur=999&term_src=Title:14:Chapter:I:Subchapter:D:Part:65:Subpart:A:65.18)*who commits an act prohibited by*[*paragraph (a) (Links to an external site.)*](https://www.law.cornell.edu/cfr/text/14/65.18#a)*of this section is eligible for any airman or ground instructor certificate or*[*rating (Links to an external site.)*](https://www.law.cornell.edu/definitions/index.php?width=840&height=800&iframe=true&def_id=5e04dbe216da194fe7f0e9b20dcdc53a&term_occur=999&term_src=Title:14:Chapter:I:Subchapter:D:Part:65:Subpart:A:65.18)*under this chapter for****a period of 1 year after the date of that act****. In addition, the commission of that act is a basis for suspending or revoking any airman or ground instructor certificate or*[*rating (Links to an external site.)*](https://www.law.cornell.edu/definitions/index.php?width=840&height=800&iframe=true&def_id=5e04dbe216da194fe7f0e9b20dcdc53a&term_occur=999&term_src=Title:14:Chapter:I:Subchapter:D:Part:65:Subpart:A:65.18)*held by that*[*person (Links to an external site.)*](https://www.law.cornell.edu/definitions/index.php?width=840&height=800&iframe=true&def_id=24a80ca42ed148d527b7ddad982da95a&term_occur=999&term_src=Title:14:Chapter:I:Subchapter:D:Part:65:Subpart:A:65.18)*.*

***Plagiarism***is a specific form of cheating: the use of another’s words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights.

**Incidents of cheating and plagiarism will result in any of a variety of sanctions and penalties, which may range from a failing grade on a particular examination, paper, project, or assignment in question to a failing grade (F) in the course, at the discretion of the instructor and depending on the severity and of the incidents.**

**Technological Gadgets:**Mobile phones must be silenced and put away during class. There is an exception for tablets and laptops, but these devices are only allowed to be used in class during lecture and discussion for note and test taking. Computer use for note taking must be approved by the instructor and proof of those notes will be periodically checked by your instructor. If this privilege is abused or computer use becomes distracting, I will suspend this privilege. Mobile phone conversations, including texting, are distracting in the classroom setting and are not allowed. Please wait until break to use your phones.

**Special Needs Requests:**If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.