



AMT 51 Safety and Basic Electricity Fall 2023

Course Schedule	
Day	Topic
Week 1	Course Introduction
	Basic safety theory
	Facility inspection procedures
	Related OSHA requirements
Week 2	Eye, respiratory, and limb safety protocols
	Personal protection issues
	Related OSHA requirements
Week 3	Risk determination
	Risk mitigation
	Related OSHA requirements
Week 4	Material Safety Data Sheets
	Related OSHA requirements
	OSHA 10 Exam preparation
Week 5	OSHA 10 Exam preparation
	OSHA 10 Exam
Week 6	Relationship between volts, Ohms, Amps
	Electrical Circuits DC
Week 7	Calculating volts, ohms, amps
	Multimeter use: measuring volts, ohms, amps
Week 8	Electrical Circuits, AC
	Electrical power
	Multimeter use: measuring volts, ohms, amps
Week 9	Multimeter use: measuring volts, ohms, amps
	Snap-On multimeter preparation
	Snap-On Multimeter Exam



AMT 51 Safety and Basic Electricity (59087) Fall 2023

Instructor: Melissa Warner

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CLASS LOCATION: Woodlake High School, Room 6

DAILY SCHEDULE: HYBRID COURSE
First class meeting in-person, Tuesday, Aug 14 from 1:30M - 2:20PM
Tue/Thurs Aug 14 through Friday Oct 6 is online

HOLIDAYS (NO CLASS): Sep. 5 Labor Day

IMPORTANT DATES: Aug 11 last day for full refund of enrollment fees (tuition)
Sep 2 last day to drop but will receive a "W" grade
Oct 6 last day of the semester

REQUIRED TEXTBOOKS/EQUIPMENT:

- 1) Pencils, pens, paper, 8½ by 11 binder
- 2) Airframe & Powerplant Mechanics General Handbook, FAA-H-8083-30ATB
ISBN: ISBN-13: 978194114460225B (electronic version provided by the college in Canvas)

COURSE DESCRIPTION: This course provides familiarization on two skills and technical knowledge needed to perform maintenance on aircraft in the aviation maintenance industry. The topics covered include: OSHA safety in a maintenance shop, risk management, plus basic electricity and electrical multimeter use. OSHA 10 General Industry Card and Snap-On Multimeter certification training is included in this course.

Learning Outcomes and Objectives

Course Objectives

1. Measure voltage, current, and resistance in an aircraft electrical circuit.
2. Identify and explain maintenance shop hazards and mitigation techniques

CSLOs

AMT-51 SLO1: Calculate and measure electrical circuits common to aircraft systems and determine the correct function of circuit components

AMT-51 SLO2: Inspect maintenance shop areas to find potential risks then generate mitigation steps to improve safety.

Course Outline

Relationship between Volts, Ohms, Amps Electrical circuits, DC
Electrical Circuits, AC Electrical power
Calculating volts, ohms, amps, power
Multimeter use: measuring volts, ohms, amps Basic safety theory
Facility inspection procedures Personal protection issues
Eye, respiratory, and limb safety protocols Risk determination
Risk mitigation
Material Safety Data Sheets



Lab Outline

Relationship between Volts, Ohms, Amps Electrical circuits, DC
Electrical Circuits, AC Electrical power
Calculating volts, ohms, amps, power
Multimeter use: measuring volts, ohms, amps Basic safety theory
Facility inspection procedures Personal protection issues
Eye, respiratory, and limb safety protocols Risk determination
Risk mitigation
Material Safety Data Sheets

GRADING POLICY:

	points
Quizlet Live	10
Physical demonstrations	10
Group Projects	10
Homework, all combined	10
OSHA 10 Exam	20
Snap-On Multimeter Exam	20
Quizzes, all combined	10
Multimeter Use demonstration	10
TOTAL	100

Grading Scale: 90.0% and above = A
 80.0% and above = B
 70.0% and above = C
 60.0% and above = D
 Below 60.0% = F

Scores will not be rounded up - i.e. 89.99% = B

There is no extra credit in this course.

GRADED ACTIVITIES:

DAILY CLASS SCHEULE OF EVENTS: See Daily Schedule at beginning of this document for



calendar of events.

HOMEWORK: Homework typically consists of reading assignments from multiple sources plus studying for tests.

ATTENDANCE POLICY: The intent of this attendance policy is to ensure:

- 1) The student gains the most from the learning experience of this course and is present to learn.
- 2) The student learns the typical attendance responsibilities when employed as a pilot.

Reading assignments, homework, test dates, etc. may be verbally changed and announced during any class meeting. Students are expected to attend all scheduled class meetings, be punctual, write down verbal directions, and then follow all verbal and written directions. It is the student's responsibility to find out what was missed if the student is late or absent.

It is the student's responsibility to ask the instructor to accomplish make-up graded activity.

Students may turn-in missed graded work up through the last scheduled day of the course.

STUDENT CONDUCT STANDARDS: Respect for the rights of others and for the College and its property are fundamental expectations for every student. 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>

BEHAVIOR: Any behavior which disrupts other student learning will not be tolerated. Here are some examples of inappropriate in-class behavior:

1. Eating of any kind in class or lab. Covered drinks are allowed in classrooms and in the designated area in lab only. No drinks of any kind are ever allowed in any computer lab.
2. Using foul language
3. Total of student voices being louder than the instructor
4. Cell phones ringing or texting during class
5. Horseplay
6. Discriminatory or harassing remarks based on gender, age, national origin, race, or religion, or disability.

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.

Cheating is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an



attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another's work, supplying one's work to another, giving or receiving copies of examinations without an instructor's permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely.

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 may 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 in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents.

While in possession of quizzes or tests (either during the exam or during review), student may not take pictures or take notes of any kind on the testable material

DOING WELL IN THIS COURSE: To learn the most from this course, the instructor suggests the following techniques:

- 1) Maintain punctual and perfect attendance.
- 2) Show up prepared (having read text, accomplish homework assignments, studied for tests/final exam, and brought equipment (homework, notepaper, pencils, pens, erasers) to class.
- 3) Study alone plus participate in a study group three times per week (every week) to do practice questioning for each test/exam.
- 4) Read and follow all verbal & written (syllabus, exams, homework, project) instructions.
- 5) Use a day planner and refer to schedule of class activities.
- 6) Get a good night's sleep, eat healthy, exercise, and stay hydrated.
- 7) Ask the instructor for additional help.

PROBLEMS: Personal problems that affect your academic performance must be brought to the attention of the instructor immediately. *Problems must be worked out in advance.* Doing poorly on a graded activity or not showing up for a graded activity cannot be fixed "after the fact."

CELL PHONE, TABLETS, LAPTOPS: No use of Personal Electronic Devices (PED) (such as cell phones, tablets) in class (laptops/tablets may be used to take notes in class) or in lab without prior instructor permission.

STUDENTS WITH DISABILITIES/SPECIAL ACCOMMODATIONS: 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.

GRIEVANCE PROCEDURE: Every effort is made to treat all students the same. If you feel you have been treated unfairly, please inform the instructor immediately so appropriate corrections can be made. If you have a problem with the instructor or the way this course is conducted, please talk to the instructor immediately.

