I. INTRODUCTION

A. The Air Commerce Act of 1926 was the beginning of regulation within aviation industry. The understanding of regulations governing aviation maintenance and the information provided in the aircraft and component manufacturers is vital to the aviation mechanic. This course is an introduction to the use and understanding of the Federal Aviation Regulations, aircraft manufacturer’s publications, correct use of forms, records and the exercise of mechanics privileges within their prescribed limitations.

B. This is a required course of study for the Associate Degree of Applied Science in Aviation Maintenance Technology.

C. This course is occupationally related and serves as preparation for careers in the field of Aviation Maintenance.

D. Prerequisite: None

II. LEARNING OUTCOMES

Upon successful completion of this course, Federal Aviation Regulations, the student will:

A. Demonstrate the ability to read, comprehend and apply information contained in Federal Aviation Administration and manufacturers’ aircraft maintenance specifications, data sheets, manuals, publications and related Airworthiness Directives and Advisory material. (F1,F5,F10)

B. Explain the mechanic privileges granted to Aviation Maintenance Technicians, Authorized Inspectors and Repairmen. Explain the legal limitations of each category of maintenance airmen. (F1,F5,F10)
C. Demonstrate the ability to write descriptions of work performed including aircraft discrepancies and corrective actions. Complete required maintenance forms, records and inspection reports. (F1,F5,F10)

III. INSTRUCTIONAL MATERIALS

A. The instructional materials identified for this course are viewable through www.cted.edu/books

B. Supplemental Reading: None


IV. COURSE REQUIREMENTS

The following will be required of each student for successful completion of this course:

A. Reading Assignment: Students are required to complete all reading assignments prior to the class in which the materials will be discussed. Students are subject to announced and unannounced written and oral examinations on assigned reading material.

B. Projects: Based on instructor’s discretion and availability of resources, the following projects will be assigned:

1. Locate specification sheets for the aircraft, engine and propeller.

2. Locate and list all applicable Airworthiness Directives for a specific make and model aircraft.

3. Make entries in correct records for major, minor and preventive maintenance.

4. Demonstrate ability to read and apply information contained in Federal Aviation Administration and manufacturers publications.
C. Class performance: Students are required to attend all classes and to be in the classroom on time. The instructor can lower a student’s grade because of excessive tardiness. When absent from class for any reason, it is the student’s responsibility to arrange for and make up assignments missed during the absence.

D. Class Participation: Students will earn a satisfactory grade in the course by attending and regularly participating in class, giving complete attention to class activities, completion of all assigned work and successfully completing the examinations. Students are required to maintain a minimum GPA of 2.0 to receive a passing grade for the class and are encouraged to compute and monitor their GPA as the class progresses.

V. EXAMINATIONS

A. There will be three written examinations for this course covering all the lecture notes and reading material.

B. Practicum: Students will complete projects as assigned by the instructor who will provide all materials and equipment required to properly perform the projects using approved methods.

V. SEMESTER GRADE COMPUTATION

<table>
<thead>
<tr>
<th>EXAMINATIONS</th>
<th>POINTS</th>
<th>POINT TO GRADE RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXAM 1</td>
<td>300</td>
<td>900-1000 = A</td>
</tr>
<tr>
<td>EXAM 2</td>
<td>300</td>
<td>800- 899 = B</td>
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<tr>
<td>EXAM 3</td>
<td>300</td>
<td>700- 799 = C</td>
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<tr>
<td>Practicum/Projects 1-4</td>
<td>100</td>
<td>600- 699 = D</td>
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<tr>
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<td>0- 599 = F</td>
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</tbody>
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TOTAL 1000

VI. NOTES AND ADDITIONAL INSTRUCTIONS FROM COURSE INSTRUCTOR

A. Course Withdrawal: It is the student’s responsibility to officially drop a class if circumstances prevent attendance. In order to be officially withdrawn from the course, a student must obtain, complete and file an Application for Withdrawal form with the College. The student’s transcript will show “W” or “F”, depending on whether the student was passing or failing at the time of withdrawal.

B. Administrative Withdrawal: Students not meeting course objectives or satisfactory progress may be withdrawn at the discretion of the instructor.
C. **Cellular Phones and Beepers:** Cellular phones and beepers will be turned off while the student is in the classroom or laboratory.

D. **American’s with Disabilities Act (ADA):** Disability Support Services provide services to students who have appropriate documentation of a disability. Students requiring accommodations for class are responsible for contacting the Office of Disability Support Services (DSS) located on the central campus. This service is available to all students, regardless of location. Explore the website at [www.ctcd.edu/disability-support](http://www.ctcd.edu/disability-support) for further information. Reasonable accommodations will be given in accordance with the federal and state laws through the DSS office.

E. **Instructor Discretion:** The instructor reserves the right of final decision in course requirements.

F. ** Civility:** Individuals are expected to be cognizant of what a constructive educational experience is and respectful of those participating in a learning environment. Failure to do so can result in disciplinary action up to and including expulsion.

VII. COURSE OUTLINE

A. **Module One:** Federal Aviation Regulations

1. **Learning Outcomes:** upon successful completion of this module, the Student will:

   Understand and demonstrate the use of Federal Aviation Regulations, Advisory circulars, type certificate data sheets, technical standard orders, airworthiness alerts and directives and technical manuals.

2. **Learning Activities:**

   Successfully complete examination 1 on material contained in Module 1. (F1,F5,F10)

3. **Equipment and Materials:**

4. **Module Outline One: Federal Aviation Regulations**

   a. Role of FAA
   b. Federal Aviation Regulations
   c. Advisory Circulars
   d. Aircraft Certification
   1. Approved type certificates
      a) Type certificate data sheets
      b) Aircraft specifications
      c) Aircraft listings
   2. Production Certificates
   3. Airworthiness Certificates
   4. Supplemental type certificates
   e. Airworthiness Directives
      General aviation airworthiness alerts
   f. Technical Standard Orders (TSO)
   g. Manufacturer Approval
   h. Manufacturer’s Maintenance Manuals
   i. ATA 100 Specifications
   j. Component Maintenance Manuals (CMM)

B. **Module Two: Maintenance Forms and Records**

1. **Learning Outcomes:** upon successful completion of this module, the Student will:

   a. Write descriptions of work performed including aircraft discrepancies and corrective actions using typical aircraft maintenance records.

   b. Properly complete required maintenance forms, records and inspection reports.

2. **Learning Activities:**

   a. Successfully complete examination 2 covering material found in Module 2. (F1,F5,F10)

   b. Satisfactorily complete assigned projects. (F1,F5,F10)

3. **Equipment and Materials:**

   Aircraft forms and records, FAA Form 337

4. **Module Outline Two: Maintenance Forms and Records**
a. Maintenance and Inspection Records
  1. Required Maintenance Records
  2. Maintenance Record entries
     a) Maintenance entries
     b) Inspection entries
b. Maintenance Forms
  1. Major Repair and Alteration FAA Form 337
  2. Malfunction or defect report
  3. Inspection reminder

C. Module Three: Mechanic Privileges and Limitations

1. Learning Outcomes: upon successful completion of this module, the Student will:
   a. Explain the privileges granted to Aviation Maintenance Technicians, Authorized Inspectors and Repairmen
   b. Describe the legal limitation of each category of maintenance airmen.

2. Learning Activities:

   Successfully complete examination 3 on material found in this module. (F1,F5,F10)

3. Module Outline Three: Mechanic Privileges and Limitations
   a. Maintenance Classifications
      1. Inspections
         a) Preflight inspections
         b) Annual and one-hundred hour inspections
         c) Progressive inspection
         d) Continuous airworthiness inspection program
         e) Special inspections
            1) Altimeter and static system inspection
            2) ATC transponder tests and inspection
            3) Special inspections
   b. Classification of Maintenance Airmen
      1. Technician
         a) Requirements for certification
         b) Privileges and limitations of a technician
      2. Inspection Authorization
         a) Requirements for IA certification and renewal
b) Privileges and limitations of a technician with an Inspection Authorization.

3. Repairmen