

George Stone Technical College



Aviation Powerplant Mechanics

Program Instructional Plan

Bill Davis, Coordinator

William Chambers, Instructor

Ryan Harris, Instructor

Joseph Nielson, Instructor

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George Stone Technical College

Instructional Plan

Mission Statement

The mission of George Stone Technical College (GSTC) is to provide quality academic, career, and technical education opportunities for all learners through instruction that integrates rigor, relevance, and relationships.

Admission Requirements

Applicants must be at least 16 years of age and capable of meeting the academic, physical, and emotional demands of their chosen program. Admission is open to all individuals regardless of gender, age, race, color, religion, national origin, disability, or marital status in accordance with the school's nondiscrimination policy.

Admission Process:

1. Complete an online application at www.GeorgeStoneCollege.edu.
2. Take the basic skills assessment, if applicable.
3. Meet with a school counselor for advisement.
4. Provide documentation of Florida residency for tuition purposes.
5. Fulfill any program-specific entry requirements.

A high school diploma or GED® is not required for enrollment in most programs but is recommended prior to completion.

Basic Skills Assessment

All students entering a Career and Technical Education (CTE) program of 450 hours or more (except Law Enforcement) must take a state-mandated basic skills evaluation prior to enrollment, unless qualifying for an exemption.

Exemptions include:

- Associate's degree or higher
- Active duty U.S. military
- Standard Florida high school diploma (2007 or later)
- State-approved industry certification aligned to the program

Students not meeting required scores must participate in remediation and demonstrate progress prior to program completion.

Disability Accommodations

In order to receive disability accommodations, students must self-disclose the disability to the counseling staff during the admissions process and provide documentation that clearly shows evidence of a disability. A school counselor will schedule a meeting with the student and the instructor to discuss the documented disability and applicable accommodations. Accommodations are based on individual needs and designed to ensure equal access to instruction, assessments, and facilities. Accommodations received in postsecondary education may differ from those received in secondary education and are reasonable as they relate to the industry or field. GSTC provides waivers to students with disabilities as defined in Section 1004.02(6) of the Florida Statutes to meet the career basic skills grade levels required for completion of career and technical programs as described in rule 6A-10.040(2).

A student with a documented disability, who is enrolled for remediation through adult education, and has completed 90% of the competencies of a career and technical program of study with a cumulative grade point average of at least 80% or higher, may petition to receive a waiver for the basic skills exit exam after attempting to pass it on at least two occasions. Waiver requests are available from a school counselor.

Tuition and Fees

Tuition is established by the Florida Legislature and payable at the start of each enrollment period. All required tuition, lab, and registration fees must be paid prior to class attendance.

- Florida Residents pay in-state tuition rates.
- Non-residents pay out-of-state rates per state policy.
- Eligible high school and dual-enrolled students receive tuition waivers.

Attendance Policy

GSTC emphasizes attendance as critical for developing professionalism and achieving success. Students are expected to attend all scheduled hours and participate fully.

Key Guidelines:

- Absence of six (6) consecutive days results in withdrawal.
- Attendance below 83% triggers probation and possible withdrawal.
- Leave of absence (minimum 10 days) requires administrative approval.
- Attendance is measured by presence only; no excused/unexcused distinction.

Plan of Instructional Practices

Instruction includes lecture, demonstration, discussion, guided practice, simulation, cooperative education, and industry-based projects. Faculty adapt instruction to meet individual learning needs and employ competency-based strategies aligned with state frameworks.

Students use textbooks, digital tools, lab equipment, and simulation technologies reflecting current industry standards.

Evaluation and Grading

Evaluation is based on mastery of occupational competencies, participation, professionalism, and assessments.

Grading Scale:

A (90–100), B (80–89), C (70–79), D (60–69), F (Below 60)

A minimum grade of 70% and satisfactory progress are required to maintain enrollment and aid eligibility.

Work-Based Learning Activities

Work-based learning is an essential component of each program and bridges classroom instruction with real-world experience.

Examples include:

- In-school lab/shop projects
- Job shadowing with employers
- Cooperative education
- Externships or clinical rotations

Each activity follows a written instructional plan with objectives, competencies, and evaluation criteria.

Professional Conduct and Social Media

Students are expected to maintain professionalism, respect, and ethical behavior consistent with industry standards. Inappropriate use of social media, including the posting of confidential or offensive content, may result in disciplinary action or dismissal.

Certification and Completion

To receive a Certificate of Completion, students must:

1. Meet competencies per Florida Department of Education frameworks.
2. Satisfy attendance and grade requirements.
3. Fulfill all financial obligations.
4. Meet basic skills exit standards (if applicable).

Financial Aid

Policies and guidelines for the administration of all financial aid are established according to federal and state law. Applicants complete an information form, Free Application for Federal Student Aid, and furnish documentation needed to verify eligibility. More

information on the application process may be obtained in the Financial Aid Office. The Financial Aid Office will assist students, where possible, with access to financial support offered by federal agencies (U.S. Department of Education – Pell Grants, Department of Veterans' Affairs), other state and local agencies and local organizations (scholarships).

Florida Department of Education
Curriculum Framework

Program Title: Aviation Powerplant Mechanics
Program Type: Career Preparatory
Career Cluster: Transportation, Distribution and Logistics

Career Certificate Program

| | | | |
|----------------------------|---|---|---|
| Program Number | T640400 | | |
| CIP Number | 0647060801 | | |
| Grade Level | 30, 31 | | |
| Program Length | 1,350 hours | | |
| Teacher Certification | Refer to the Program Structure section | | |
| CTSO | SkillsUSA | | |
| SOC Codes (all applicable) | Please see the CIP to SOC Crosswalk located at the link below. | | |
| CTE Program Resources | http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml | | |
| Basic Skills Level | Computation (Mathematics): 10 | Communications (Reading and Language Arts): | 9 |

Purpose

The purpose of this program is to prepare students for employment or advanced training in the commercial and general aviation industry. Instruction is designed to prepare students for Federal Aviation Administration (FAA) license examinations for Airframe ratings. Federal Aviation Regulation (FAR) Part 147 identifies minimum requirements for AMT schools. Any changes to the FAA-approved course content must be approved in advance. This program prepares students for employment as an Aviation Maintenance General Technician, and an Aviation Powerplant Maintenance Technician.

This program focuses on broad, transferable skills, stresses understanding of all aspects of the aviation maintenance industry, and demonstrates elements of the industry such as planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Transportation, Distribution and Logistics career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Transportation, Distribution and Logistics career cluster.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of two occupational completion points. The Aviation Maintenance General Technician (AMT0705) course is the core course.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44 (3) (b), F.S.

To teach the course(s) listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

| OCP | Course Number | Course Title | Teacher Certification | Length |
|-----|---------------|--|-----------------------|-----------|
| A | AMT0705 | Aviation Maintenance General Technician | AIR MECH @7 7G | 450 hours |
| B | AMT0775 | Aviation Maintenance Powerplant Technician 1 | | 450 hours |
| | AMT0776 | Aviation Maintenance Powerplant Technician 2 | | 450 hours |

National Standards

Industry or National Standards corresponding to the standards and/or benchmarks for the Aircraft Airframe Mechanics program can be found using the following link: <http://www.gpo.gov/fdsys/pkg/CFR-2012-title14-vol3/pdf/CFR-2012-title14-vol3-part147-appC.pdf>

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline, or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social, and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership, and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

After successfully completing this program, the student will be able to perform the following:

- 01.0 Perform basic aircraft drawing skills.
- 02.0 Demonstrate aircraft weight and balance skills.
- 03.0 Perform ground operations and servicing duties.
- 04.0 Demonstrate mathematical skills.
- 05.0 Maintain forms and records.
- 06.0 Apply principles of basic physics.
- 07.0 Demonstrate the use of maintenance publications.
- 08.0 Demonstrate appropriate communication skills.
- 09.0 Demonstrate employability skills as an Aviation Maintenance General Technician.
- 10.0 Maintain aircraft fluid lines and fittings.
- 11.0 Perform aircraft materials and processes skills.
- 12.0 Perform cleaning and corrosion-control operations.
- 13.0 Perform basic electricity skills.
- 14.0 Interpret mechanic privileges and limitations.
- 15.0 Perform basic reciprocating engine skills.
- 16.0 Perform basic turbine engine skills.
- 17.0 Perform engine inspection.
- 18.0 Maintain engine instrument systems.
- 19.0 Maintain engine fire-protection systems.
- 20.0 Maintain engine electrical systems.
- 21.0 Maintain lubrication systems.
- 22.0 Maintain ignition and starting systems.
- 23.0 Maintain fuel-metering systems.
- 24.0 Maintain engine fuel systems.
- 25.0 Maintain induction and engine airflow systems.
- 26.0 Maintain engine cooling systems.
- 27.0 Maintain engine exhaust and reverser systems.
- 28.0 Maintain aircraft propellers.
- 29.0 Maintain unducted fans.
- 30.0 Maintain auxiliary power units.
- 31.0 Demonstrate knowledge of FAA Powerplant licensing requirements.
- 32.0 Demonstrate employability skills for an Aviation Maintenance Powerplant Technician (AMT) with an FAA Powerplant rating.
- 33.0 Demonstrate an understanding of entrepreneurship opportunities in Aviation Powerplant Maintenance occupations.

**Florida Department of Education
Student Performance Standards**

Program Title: Aviation Powerplant Mechanics
Career Certificate Program Number: T640400

Course Description: The Aviation Maintenance General Technician course prepares students for entry into the aviation industry. Students explore career opportunities and requirements of a professional aviation mechanic. Students study basic electricity, aircraft drawing, weight, balance, fluid lines, fittings, materials, processes, operations, services, cleaning, corrosion-control, math, forms, records, basic physics, maintenance publications, communication, and employability skills.

| Course Number: AMT0705 Occupational Completion Point: A Aviation Maintenance General Technician – 450 Hours | FAA FAR Part 147 |
|---|-------------------------|
| 01.0 Perform basic aircraft drawing skills. The student will be able to: | |
| 01.01 Use aircraft drawings, symbols, and system schematics. | App. B, B, 7. Level 2 |
| 01.02 Draw sketches of repairs and alterations. | App. B, B, 8. Level 3 |
| 01.03 Use blueprint information. | App. B, B, 9. Level 3 |
| 01.04 Use graphs and charts. | App. B, B, 10. Level 3 |
| 02.0 Demonstrate aircraft weight and balance skills. The student will be able to: | |
| 02.01 Weigh aircraft. | App. B, C, 11. Level 2 |
| 02.02 Perform complete weight-and-balance check and record data. | App. B, C, 12. Level 3 |
| 02.03 Properly configure aircraft for weighing and capable of setting up and using weighing equipment. | |
| 03.0 Perform ground operations and servicing duties. The student will be able to: | |
| 03.01 Start, ground operate, move, service, and secure aircraft and identify typical ground-operations hazards. | App. B, G, 20. Level 2 |
| 03.02 Identify and select fuels. | App. B, G, 21. Level 2 |
| 03.03 Comply with prescribed shop and personal safety procedures. | |
| 04.0 Demonstrate mathematical skills. The student will be able to: | |
| 04.01 Extract roots and raise numbers to a given power. | App. B, H, 24. Level 3 |
| 04.02 Determine areas and volumes of various geometrical shapes by solving problems for volume, weight, area, circumference, and perimeter measurements for rectangles, squares, and cylinders. | App. B, H, 25. Level 3 |

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| 04.03 | Solve ratio, proportion, and percentage problems. | App. B, H, 26. Level 3 |
| 04.04 | Perform algebraic operations involving addition, subtraction, multiplication, and division of positive and negative numbers. | App. B, H, 27. Level 3 |
| 05.0 | Maintain forms and records. The student will be able to: | |
| 05.01 | Write descriptions of work performed including aircraft discrepancies and corrective actions using typical aircraft maintenance records. | App. B, I, 28. Level 3 |
| 05.02 | Complete required maintenance forms, records, and inspection reports. | App. B, I, 29. Level 3 |
| 06.0 | Apply principles of basic physics. The student will be able to: | |
| 06.01 | Use and understand the principles of simple machines; sound, fluid, and heat dynamics; basic aerodynamics; aircraft structures; and theory of flight. | App. B, J, 30. Level 2 |
| 06.02 | Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content. | |
| 06.03 | Draw conclusions or make inferences from data. | |
| 06.04 | Identify health-related problems that may result from exposure to work-related chemicals and hazardous materials and know the proper precautions required for handling such materials. | |
| 06.05 | Understand pressure measurement in terms of PSI, inches of mercury, and KPA. | |
| 07.0 | Demonstrate the use of maintenance publications. The student will be able to: | |
| 07.01 | Demonstrate ability to read, comprehend, and apply information contained in FAA and manufacturers' aircraft maintenance specifications, data sheets, manuals, publications, and related Federal Aviation Regulations, Airworthiness Directives, and Advisory material. | App. B, K, 31. Level 3 |
| 07.02 | Read technical data. | App. B, K, 32. Level 3 |
| 08.0 | Demonstrate appropriate communication skills. The student will be able to: | |
| 08.01 | Write logical and understandable statements or phrases to accurately complete forms/invoices commonly used in business and industry. | |
| 08.02 | Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area. | |
| 08.03 | Read and follow written and oral instructions. | |
| 08.04 | Answer and ask questions coherently and concisely. | |
| 08.05 | Read critically by recognizing assumptions and implications and by evaluating ideas. | |
| 08.06 | Demonstrate appropriate telephone/communication skills. | |
| 09.0 | Demonstrate employability skills as an Aviation Maintenance General Technician. The student will be able to: | |
| 09.01 | Conduct a job search. | |

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| 09.02 | Secure information about a job. | |
| 09.03 | Identify documents that may be required when applying for a job position. | |
| 09.04 | Complete a job-application form correctly. | |
| 09.05 | Demonstrate job-interview skills. | |
| 09.06 | Identify appropriate responses to criticism from employer, supervisor, or other employees. | |
| 09.07 | Identify work habits for getting and keeping a job. | |
| 09.08 | Explain how to make job changes. | |
| 09.09 | Explain the purpose of the Federal Law as recorded in (29 CFR-1910.1200). | |
| 10.0 | Maintain aircraft fluid lines and fittings. The student will be able to: | |
| 10.01 | Fabricate and install rigid and flexible fluid lines and fittings. | App. B, D, 13. Level 3 |
| 10.02 | Utilize proper personal safety procedures for fluid lines and fittings. | |
| 11.0 | Perform aircraft materials and processes skills. The student will be able to: | |
| 11.01 | Identify and select appropriate nondestructive testing methods. | App. B, E, 14. Level 1 |
| 11.02 | Perform dye penetrant, eddy current, ultrasonic, and magnetic particle inspections. | App. B, E, 15. Level 2 |
| 11.03 | Perform basic heat-testing processes. | App. B, E, 16. Level 1 |
| 11.04 | Identify and select aircraft hardware and materials. | App. B, E, 17. Level 3 |
| 11.05 | Inspect and check welds. | App. B, E, 18. Level 3 |
| 11.06 | Perform precision measurements. | App. B, E, 19. Level 3 |
| 11.07 | Perform safety-wiring techniques. | |
| 12.0 | Perform cleaning and corrosion-control operations. The student will be able to: | |
| 12.01 | Identify and select cleaning materials. | App. B, G, 22. Level 3 |
| 12.02 | Inspect, identify, remove, and treat aircraft corrosion and perform aircraft cleaning. Understand metal strength limitations when removing corrosion. | App. B, G, 23. Level 3 |
| 13.0 | Perform basic electricity skills. The student will be able to: | |
| 13.01 | Calculate and measure capacitance and inductance. | App. B, A, 1. Level 2 |
| 13.02 | Calculate and measure electrical power. | App. B, A, 2. Level 2 |
| 13.03 | Measure voltage, current, resistance, and continuity. | App. B, A, 3. Level 3 |
| 13.04 | Determine the relationship of voltage, current, and resistance in electrical circuits. | App. B, A, 4. Level 3 |

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| 13.05 | Read and interpret aircraft electrical-circuit diagrams, including solid-state devices and logic functions. | App. B, A, 5. Level 3 |
| 13.06 | Inspect and service batteries. | App. B, A, 6. Level 3 |
| 13.07 | Utilize proper electrical safety procedures. | |
| 14.0 | Interpret mechanic privileges and limitations. The student will be able to: | |
| 14.01 | Exercise mechanic privileges within the limitations prescribed by Part 65 of this chapter. | App. B, L, 33. Level 3 |
| 14.02 | Identify the information in Federal Aviation Regulations (FAR) Part 65 pertaining to eligibility for Aviation Maintenance Technician (AMT) certification and ratings. | |
| 14.03 | Identify the FAA requirements that must be satisfied to display the FAA Airframe and Powerplant license. | |

Course Description: The Aviation Maintenance Powerplant Technician 1 course is designed to build on the skills and knowledge students learned in the Aviation Maintenance General Technician course. Students explore career opportunities and requirements of a professional aviation mechanic. Students study reciprocating engines, turbine engines, inspection, instruments, fire-protection, electrical, lubrication, ignition, and starting systems.

| Course Number: AMT0775 Occupational Completion Point: B (1 of 2) Aviation Maintenance Powerplant Technician 1 – 450 Hours | | FAA FAR Part 147 |
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| 15.0 | Perform basic reciprocating engine skills. The student will be able to: | |
| 15.01 | Inspect and repair a radial engine. | App. D, I, A, 1. Level 1 |
| 15.02 | Overhaul a reciprocating engine. | App. D, I, A, 2. Level 2 |
| 15.03 | Inspect, check, service, and repair reciprocating engines and engine installations. | App. D, I, A, 3. Level 3 |
| 15.04 | Install, troubleshoot, and remove reciprocating engines. | App. D, I, A, 4. Level 3 |
| 16.0 | Perform basic turbine engine skills. The student will be able to: | |
| 16.01 | Overhaul a turbine engine. | App. D, I, B, 5. Level 2 |
| 16.02 | Inspect, check, service, and repair turbine engines and turbine engine installations. | App. D, I, B, 6. Level 3 |
| 16.03 | Install, troubleshoot, and remove turbine engines. | App. D, I, B, 7. Level 3 |
| 17.0 | Perform engine inspection. The student will be able to: | |
| 17.01 | Perform Powerplant conformity and airworthiness inspections. | App. D, I, C, 8. Level 3 |
| 18.0 | Maintain engine instrument systems. The student will be able to: | |
| 18.01 | Troubleshoot, service, and repair electrical and mechanical fluid rate-of-flow indicating systems. | App. D, II, A, 9. Level 2 |

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| 18.02 | Inspect, check, service, troubleshoot, and repair electrical and mechanical engine temperature, pressure, and rpm indicating systems. | App. D, II, A, 10. Level 2 |
| 19.0 | Maintain engine fire-protection systems. The student will be able to: | |
| 19.01 | Inspect, check, service, troubleshoot, and repair engine fire-detection and extinguishing systems. | App. D, II, B, 11. Level 3 |
| 20.0 | Maintain engine electrical systems. The student will be able to: | |
| 20.01 | Repair engine electrical system components. | App. D, II, C, 12. Level 2 |
| 20.02 | Install, check, and service engine electrical wiring, controls, switches, indicators, and protective devices. | App. D, II, C, 13. Level 3 |
| 21.0 | Maintain lubrication systems. The student will be able to: | |
| 21.01 | Identify and select lubricants. | App. D, II, D, 14. Level 2 |
| 21.02 | Repair engine lubrication system components. | App. D, II, D, 15. Level 2 |
| 21.03 | Inspect, check, service, troubleshoot, and repair engine lubrication systems. | App. D, II, D, 16. Level 3 |
| 22.0 | Maintain ignition and starting systems. The student will be able to: | |
| 22.01 | Overhaul magneto and ignition harness. | App. D, II, E, 17. Level 2 |
| 22.02 | Inspect, service, troubleshoot, and repair reciprocating and turbine engine ignition systems and components. | App. D, II, E, 18. Level 2 |
| 22.03 | Inspect, service, troubleshoot, and repair turbine engine electrical starting systems. | App. D, II, E, 19a. Level 3 |
| 22.04 | Inspect, service, and troubleshoot turbine engine pneumatic starting systems. | App. D, II, E, 19b. Level 1 |

Course Description: The Aviation Maintenance Powerplant Technician 2 course is designed to build on the skills and knowledge students learned in the Aviation Maintenance Powerplant Technician 1 course. Students explore career opportunities and requirements of a professional aviation mechanic. Students study fuel, metering, induction, airflow, cooling, exhaust, reverser, propellers, inductors, auxiliary power units, FAA Powerplant Rating licensing, employability skills, and entrepreneurship.

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| Course Number: AMT0776 | | FAA FAR Part 147 |
| Occupational Completion Point: B (2 of 2) | | |
| Aviation Maintenance Powerplant Technician 2 – 450 Hours | | |
| 23.0 | Maintain fuel metering systems. The student will be able to: | |
| 23.01 | Troubleshoot and adjust turbine engine fuel-metering systems and electronic-engine fuel controls. | App. D, II, F, 20. Level 1 |
| 23.02 | Overhaul carburetor. | App. D, II, F, 21. Level 1 |
| 23.03 | Repair engine fuel metering system components. | App. D, II, F, 22. Level 2 |
| 23.04 | Inspect, check, service, troubleshoot, and repair reciprocating and turbine engine fuel-metering systems. | App. D, II, F, 23. Level 3 |

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| 24.0 | Maintain engine fuel systems. The student will be able to: | |
| 24.01 | Repair engine fuel system components. | App. D, II, G, 24. Level 2 |
| 24.02 | Inspect, check, service, troubleshoot, and repair engine fuel systems. | App. D, II, G, 25. Level 3 |
| 25.0 | Maintain induction and engine airflow systems. The student will be able to: | |
| 25.01 | Inspect, check, troubleshoot, service, and repair engine ice and rain control systems. | App. D, II, H, 26. Level 2 |
| 25.02 | Inspect, check, service, troubleshoot, and repair heat exchangers, superchargers, and turbine engine airflow and temperature control systems. | App. D, II, H, 27. Level 1 |
| 25.03 | Inspect, check, service, and repair carburetor air intake and induction manifolds. | App. D, II, H, 28. Level 3 |
| 26.0 | Maintain engine cooling systems. The student will be able to: | |
| 26.01 | Repair engine cooling system components. | App. D, II, I, 29. Level 2 |
| 26.02 | Inspect, check, troubleshoot, service, and repair engine cooling systems. | App. D, II, I, 30. Level 3 |
| 27.0 | Maintain engine exhaust and reverser systems. The student will be able to: | |
| 27.01 | Repair engine exhaust system components. | App. D, II, J, 31. Level 2 |
| 27.02 | Inspect, check, troubleshoot, service, and repair engine exhaust systems. | App. D, II, J, 32a. Level 3 |
| 27.03 | Troubleshoot and repair engine thrust reverser systems and related components. | App. D, II, J, 32b. Level 1 |
| 28.0 | Maintain aircraft propellers. The student will be able to: | |
| 28.01 | Inspect, check, service, and repair propeller synchronizing and ice control systems. | App. D, II, K, 33. Level 1 |
| 28.02 | Identify and select propeller lubricants. | App. D, II, K, 34. Level 2 |
| 28.03 | Balance propellers. | App. D, II, K, 35. Level 1 |
| 28.04 | Repair propeller control system components. | App. D, II, K, 36. Level 2 |
| 28.05 | Inspect, check, service, and repair fixed-pitch, constant-speed, feathering propellers, and propeller-governing systems. | App. D, II, K, 37. Level 3 |
| 28.06 | Install, troubleshoot, and remove propellers. | App. D, II, K, 38. Level 3 |
| 28.07 | Repair aluminum alloy propeller blades. | App. D, II, K, 39. Level 3 |
| 29.0 | Maintain unducted fans. The student will be able to: | |
| 29.01 | Inspect and troubleshoot unducted fan systems and components. | App. D, II, L, 40. Level 1 |
| 30.0 | Maintain auxiliary power units. The student will be able to: | |
| 30.01 | Inspect, check, service, and troubleshoot turbine-driven auxiliary power units. | |

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| 31.0 | Demonstrate knowledge of Federal Aviation Administration Powerplant licensing requirements.--The student will be able to: | |
| 31.01 | Explain the requirements for obtaining FAA authorization to take the FAA Powerplant examinations. | |
| 32.0 | Demonstrate employability skills for an Aviation Maintenance Powerplant Technician (AMT) with an FAA Powerplant rating. The student will be able to: | |
| 32.01 | Conduct a job search for an AMT position. | |
| 32.02 | Secure information about the requirements for an AMT in a particular firm. | |
| 32.03 | Identify documents that may be required when applying for an AMT position. | |
| 32.04 | Complete a job-application form correctly. | |
| 32.05 | Demonstrate competency in job-interview techniques. | |
| 32.06 | Identify or demonstrate appropriate responses to criticism from employer, supervisor, or other employees. | |
| 32.07 | Identify or adopt acceptable AMT work habits. | |
| 32.08 | Demonstrate knowledge of how to make job changes appropriately. | |
| 32.09 | Demonstrate acceptable employee health habits. | |
| 32.10 | Demonstrate knowledge of the Federal Law as recorded in (29 CFR-1910.1200). | |
| 33.0 | Demonstrate an understanding of entrepreneurship related to opportunities in Aviation Powerplant Maintenance occupations. The student will be able to: | |
| 33.01 | Define entrepreneurship. | |
| 33.02 | Describe the importance of entrepreneurship to the Aviation Maintenance industry. | |
| 33.03 | List the advantages and disadvantages of Aviation Maintenance business ownership. | |
| 33.04 | Identify the risks involved in ownership of an Aviation Maintenance business. | |
| 33.05 | Identify the necessary personal characteristics of a successful Aviation Maintenance business owner. | |
| 33.06 | Identify the business skills needed to operate an Aviation Maintenance business efficiently and effectively. | |

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Classroom, shop, and laboratory activities are an integral part of this program. FAR Section 147.21(e) requires teaching of at least 50 percent of the curriculum in the shop or laboratory. These activities include instruction in the use of safety procedures, tools, equipment, materials, and processes found in the industry. Equipment and supplies should be provided to enhance hands-on experiences for students in the chosen occupation.

Special Notes

Required FAA exams include GENERAL written, oral, and practical; AIRFRAME written, oral, and practical; and POWERPLANT written, oral, and practical. The only way a person can get authorization to take these examinations is to (1) graduate from an approved school or (2) obtain permission from the FAA to take the test based on prior experience on certified aircraft. Schools cannot grant permission (FAA FAR, Part 65 and Part 147, Subpart C 147.31).

Since an Aviation Maintenance Technician School (AMTS) is certified and inspected by the FAA, satisfaction of FAR Part 147 requirements should be the primary concern of an AMTS. When local and state educational requirements conflict with the FAA's regulation of an AMTS, those requirements must be resolved to satisfy FAR Part 147. In other words, FAA standards take precedence over other requirements. The FAA specifies minimum hours required and encourages schools to exceed minimum standards for the curriculum. The course content specified by the FAA may not be lowered.

"FAA FAR Part 147" identifies standards required by the FAA. Minimum teaching levels expected by the FAA also appear:

- Level 1:** Knowledge of general principles.
- Level 2:** Knowledge of general principles and limited practical application.
- Level 3:** Knowledge of general principles with a high degree of practical application and hands-on skill levels according to FAA FAR Part 147: For subjects taught at Level 3, all special tools required to meet "return to service" standards must be in satisfactory working condition, properly calibrated/tested, and of the proper kind for the purpose for which they are intended. Tools should include an adequate supply of special tools appropriate to the ratings and curriculum. If students are required to provide hand tools, then the school should list the specific tools with the curriculum and provide a copy of this list to the students. Shop equipment and special tools should be maintained in good working order and be in a condition for safe operation.

All tools and equipment should be maintained in good working order and be in a condition for safe operation. The types of tools and equipment required for Aviation General, Airframe, and Powerplant teaching include the ones listed below:

Common hand tools, portable tools, precision tools, machine tools, torquing tools, shop equipment and machinery, specialized tools and equipment, airframe structures, aircraft, airframes, powerplants, propellers, and components of this equipment

FAA FAR Part 147 states: Each certified Aviation Maintenance Technician School shall provide facilities, equipment, and material equal to the standards currently required for the issue of the certificate and rating that it holds.

Refer to FAA FAR Part 147 and industry publications for more information about required levels of proficiency, hours of instruction, and updates to occupational titles and training requirements. Keeping pace with the standards of industry and maintaining a high quality of training requires ongoing linkages with industry and FAA representatives.

Career and Technical Student Organization (CTSO)

SkillsUSA is the co-curricular career and technical student organization(s) providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate Programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary

education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.