AVIATION/AIRWAY MANAGEMENT (ATE)

ATE 101 (3 credit hours)
Pre-Aviation
Comprehend the basic math, physics, and theory of flight needed to be successful in the Aviation Maintenance Technology Program and become an Aviation Maintenance Technician. Understand the relationships relating to human factors and safety in the Aviation industry. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 103 (3 credit hours)
Introduction to Aircraft Maintenance I
Obtain a working knowledge and familiarity with the resources used to locate reference materials, understand governing federal regulations, and document maintenance actions taken in the Aviation Maintenance Industry. Understand rules and procedures for aircraft ground runs and general aircraft movement processes. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 105 (3 credit hours)
Introduction to Aircraft Maintenance II
Obtain the theoretical and practical expertise needed to apply basic electrical concepts in problem solving and practical applications. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 107 (3 credit hours)
Introduction to Aircraft Maintenance III
Acquire the theoretical and practical skills to perform weight and balance calculations to aircraft upon changes to the aircraft including equipment, structural repairs, or alterations. Demonstration of an understanding in types of corrosion, their treatment, and prevention. Development in the execution of applicable records and logbook entries associated with weight and balance changes as well as corrosion removal and preventative measures. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 109 (3 credit hours)
Introduction to Aircraft Maintenance IV
Provides an understanding of basic hydraulic functions, the fabrication of tubing and flex hoses as well as seal comparability. Includes instruction in structural inspection, materials and fasteners, and repair methods. Lecture: 2 credits (30 contact hours). Laboratory: 1 credits (66 contact hours).
Pre-requisite: Computer Literacy or Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 201 (3 credit hours)
Aircraft Powerplants and Related Systems I
Demonstrate an understanding of aircraft powerplants including both reciprocating engines and turbine engine installations. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Pre-requisite: ((ATE 101 and ATE 103 and ATE 105 and ATE 107 and ATE 109) with a grade of C or greater) or Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 203 (3 credit hours)
Aircraft Powerplants and Related Systems II
Obtain the expertise to troubleshoot, service, repair, and inspect aircraft engine lubrication systems, reciprocating engine induction and cooling systems, turbine engine air systems, and engine exhaust and reverser systems. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Pre-requisite: ((ATE 101 and ATE 103 and ATE 105 and ATE 107 and ATE 109) with a grade of C or greater) or Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 205 (3 credit hours)
Aircraft Powerplants and Related Systems III
Demonstrate and understanding of aircraft engine electrical systems, ignition and starting systems, Engine fire protection systems, and engine instrument systems to include troubleshooting, servicing, repair, and removal an reinstallation of associated components. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Pre-requisite: ((ATE 101 and ATE 103 and ATE 105 and ATE 107 and ATE 109) with a grade of C or greater) or Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 207 (3 credit hours)
Aircraft Powerplants and Related Systems IV
Demonstrate an understanding of Aircraft Propellers and propeller installations, engine fuel and fuel metering systems, and conducting engine inspection in accordance with regulatory guidelines and manufacturer's publications. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Pre-requisite: ((ATE 101 and ATE 103 and ATE 105 and ATE 107 and ATE 109) with a grade of C or greater) or Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 211 (3 credit hours)
Aircraft Structures I
Covers the principles of sheet metal layout, bending, and rivet installation. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Pre-requisite: ((ATE 101 and ATE 103 and ATE 105 and ATE 107 and ATE 109) with a grade of C or greater) or Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 213 (3 credit hours)
Aircraft Structures II
Demonstrate familiarity with metallic structures (welding) and Non-metallic structures (wood and aircraft covering). Obtain expertise in working with aircraft flight controls to include movement checks, rigging, balancing, and inspecting in accordance with manufacturers approved reference materials. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Pre-requisite: ((ATE 101 and ATE 103 and ATE 105 and ATE 107 and ATE 109) with a grade of C or greater) or Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 215 (3 credit hours)
Aircraft Structures III
Demonstrate a high degree of familiarity with Non-metallic structures (composite) aircraft structures including material selection, processes, safety, repairs, equipment selection and use as well as suitable references for appropriate task completion. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Pre-requisite: ((ATE 101 and ATE 103 and ATE 105 and ATE 107 and ATE 109) with a grade of C or greater) or Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 217 (3 credit hours)
Aircraft Structures IV
Demonstrate an understanding of rotorcraft mechanics and systems. Demonstrate the ability to process regulatory requirements, utilize inspection criteria found in manufacturer's publications, and carry out inspection procedures utilizing a thorough understanding of aircraft structural and system inspections. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Pre-requisite: ((ATE 101 and ATE 103 and ATE 105 and ATE 107 and ATE 109) with a grade of C or greater) or Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 221 (3 credit hours)
Aircraft Systems I
Presents aircraft fuel system inspections, servicing, repair and troubleshooting. Aircraft environmental control systems including cabin pressurization, heating, and air conditioning. Ice and Rain Control system troubleshooting, repair, installation of components and testing. Water and waste water system components, maintenance, and inspection. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Pre-requisite: ((ATE 101 and ATE 103 and ATE 105 and ATE 107 and ATE 109) with a grade of C or greater) or Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 223 (3 credit hours)
Aircraft Systems II
Examines the use of electrical systems on aircraft including theory of operation, wiring installation and approved repair methods, electrical generation, system troubleshooting and testing of systems and components. Lecture: 2 credits (30 contact hours). Laboratory: 1 credits (66 contact hours).
Pre-requisite: ((ATE 101 and ATE 103 and ATE 105 and ATE 107 and ATE 109) with a grade of C or greater) or Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 225 (3 credit hours)
Aircraft Systems III
Includes discussion, inspection, and troubleshooting of navigational and communication systems, fire detection and extinguishing systems. Covers the inspection, troubleshooting, and repair of heading, speed, altitude, time, attitude, temperature, pressure and position indicating systems and installation of instruments. Provides for the inspection, checking and servicing of speed and take-off warning systems, electrical brake controls, antiskid systems, and autopilot systems; and the pitot-static system, floating compass system and the gyros used for flight instruments. Includes the role of mechanics when working with precision instruments. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (66 contact hours).
Pre-requisite: ((ATE 101 and ATE 103 and ATE 105 and ATE 107 and ATE 109) with a grade of C or greater) or Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 227 (3 credit hours)
Aircraft Systems IV
Covers the repair of hydraulic and pneumatic power systems components. Includes the inspection, check, service, and repair of landing gear, retraction systems, shock struts, brakes, wheels, tires, and steering system. Lecture: 2 credits (30 contact hours). Laboratory: 1 credits (66 contact hours).
Pre-requisite: ((ATE 101 and ATE 103 and ATE 105 and ATE 107 and ATE 109) with a grade of C or greater) or Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

ATE 292 (3 credit hours)
Introduction To Aviation Electronics
Provides instruction in basic to intermediate electronics and specifically how they relate to aviation maintenance technology. Lecture: 3 credit hours (45 contact hours).
Attributes: Technical
Components: LEC: Lecture

ATE 293 (3 credit hours)
GROL+Radar Exam Prep
Provides instruction and preparation for the FCC General Radio Operators License and Radar endorsement exams. Lecture: 3 credit hours (45 contact hours).
Attributes: Technical
Components: LEC: Lecture

ATE 299 (1-6 credit hours)
Selected Topics in Aviation Maintenance Technology: (Topic)
Various aviation maintenance topics, issues and trends will be addressed. Topics may vary from semester to semester at the discretion of the instructors; course may be repeated with different topics to a maximum of six credit hours. Lecture: varies. Laboratory: varies.
Pre-requisite: Consent of Instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture