AVIATION MAINTENANCE TECH (AMT)

AMT A140 **3 Units (54 lecture hours)**
Helicopter Theory and Operations
Grading Mode: Standard Letter, Pass/No Pass
Transfer Credit: CSU.

Rotary wing aircraft development, technology, and construction. Federal Aviation Administration (FAA) requirements for operation and maintenance. Survey of helicopter industry. Graded or Pass/No Pass option.

AMT A150 **4 Units (36 lecture hours; 90 lab hours)**
General Maintenance Records - FAA
Grading Mode: Standard Letter
Transfer Credit: CSU.

Mechanic's privileges and limitations, maintenance forms and records, non-destructive testing, precision measurement, record keeping, and ground operation.

AMT A151 **3 Units (36 lecture hours; 72 lab hours)**
General Electricity - FAA
Grading Mode: Standard Letter
Transfer Credit: CSU.

Aircraft basic electricity, basic troubleshooting, and aircraft batteries.

AMT A152 **2 Units (18 lecture hours; 72 lab hours)**
General Airframe & Powerplant Fuel Systems - FAA
Grading Mode: Standard Letter
Transfer Credit: CSU.

Theory of fuel systems and lines and fittings. Practical experience in repair, check, service, overhaul, testing, and troubleshooting of fuel systems and system component parts.

AMT A153 **3 Units (27 lecture hours; 94.5 lab hours)**
General Materials, Processes & Welding - FAA
Grading Mode: Standard Letter
Transfer Credit: CSU.

Materials used in aircraft, cleaning of parts, hardware and other fastener identification, and aircraft welding.

AMT A154 **3 Units (54 lecture hours; 9 lab hours)**
General Weight & Balance, Math & Physics - FAA
Grading Mode: Standard Letter
Transfer Credit: CSU.

Theory and practical experience in a variety of aircraft math, physics, and weight and balance calculations, and varied problems. Practical experience in weight and balance of aircraft.

AMT A155 **2 Units (27 lecture hours; 27 lab hours)**
General Blueprint Reading & Drafting - FAA
Grading Mode: Standard Letter
Transfer Credit: CSU.

Fundamental theory of aviation blueprints and drafting. Practical experience in blueprint reading, drawing, sketches of repairs, alterations, schematics, and varied uses of graphs and charts.

AMT A160 **6 Units (72 lecture hours; 144 lab hours)**
Airframe & Powerplant Electricity - FAA
Advisory: AMT A151.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Fundamental theory relating to aircraft electrical systems, ice and rain, and fire protection systems. Practical experience in disassembly, repair, overhaul, inspection, testing of electrical components and systems.

AMT A161 **5.5 Units (54 lecture hours; 144 lab hours)**
Airframe Sheet Metal & Composite Structural Repair - FAA
Advisory: AMT A153.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Fundamental theory relating to aircraft structures. Practical experience in sheet metal, composites, wood, riveting, fabric, inspection, and painting.

AMT A162 **3 Units (36 lecture hours; 81 lab hours)**
Airframe Assembly & Rigging, Pneumatics & Environmental Control Systems - FAA
Advisory: AMT A153.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Fundamental theory of assembly, cabin control systems, and rigging. Practical experience in rigging, assembly, disassembly, repair, overhaul, testing, inspection, and operation of component parts.

AMT A163 **4.5 Units (36 lecture hours; 126 lab hours)**
Airframe Hydraulics and Landing Gear - FAA
Advisory: AMT A150 and AMT A152.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Fundamental theory of hydraulic, pneumatic, and landing gear systems. Practical experience in disassembly, repair, overhaul, test, inspection, and operation of component parts.

AMT A170 **6 Units (54 lecture hours; 171 lab hours)**
Powerplant Reciprocating Engines FAA
Advisory: AMT A150 and AMT A153.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Fundamental theory of aircraft reciprocating engines. Practical experience in overhauling, repair, assembly, testing, and troubleshooting various powerplants.

AMT A171 4 Units (45 lecture hours; 90 lab hours)
Powerplant Fuel Metering, Exhaust & Induction Systems FAA
Advisory: AMT A152.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Aircraft reciprocating engine fuel metering, induction, cooling, and exhaust systems.

AMT A172 4 Units (45 lecture hours; 108 lab hours)
Powerplant Propeller and Lubricating Systems FAA
Advisory: AMT A170.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Fundamental theory of propellers and lubrication system components. Practical experience in overhauling, repairing, testing, and troubleshooting different types of systems and components.

AMT A173 6 Units (63 lecture hours; 180 lab hours)
Powerplant Gas Turbine Engines - FAA
Advisory: AMT A150 and AMT A153.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Fundamental theory and overhaul of turbine engines, starting systems, and system components. Practical experience in disassembly, repair, overhaul, inspection, and testing of turbine engines and components.

AMT A174 2.5 Units (27 lecture hours; 54 lab hours)
Powerplant Ignition Systems - FAA
Advisory: AMT A151.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Fundamental theory of ignition systems and practical experience in disassembly, repair, overhaul, inspection, and testing of ignition components.

AMT A180 2.5 Units (31.5 lecture hours; 45 lab hours)
Airframe and Powerplant Instrumentation FAA
Grading Mode: Standard Letter
Transfer Credit: CSU.

A survey and limited practical experience of basic instrumentation systems used in private, corporate, and commercial aircraft. Included are aircraft nomenclature, acronyms, and use of computer-based training systems.

AMT A181 2 Units (27 lecture hours; 31.5 lab hours)
Airframe Communication and Navigation Systems - FAA
Advisory: AMT A180.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Survey of avionic systems used in navigation and communication and use of computer-based flight management systems, flight deck orientation, and theory of flight.

AMT A182 4 Units (54 lecture hours; 54 lab hours)
Avionics Installation Practices
Advisory: AMT A151.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Schematic reading, use of multimeter, Series and parallel circuits. Avionics terminology, system interfacing, Avionics install standard practices. Diagnostic test equipment and fault finding logic tree techniques to a systems level.

AMT A184 4 Units (54 lecture hours; 54 lab hours)
Avionics Installations and Troubleshooting
Advisory: AMT A182.

Grading Mode: Standard Letter
Transfer Credit: CSU.

A course in aircraft radio navigational and communication systems. Bench test, installation and ramp test of transmitter and receiver systems and their operating principles. Systems include VHF Comm, VOR, ILS, and Transponder. Students are required to bring hand tools.

AMT A188 1.5 Units (27 lecture hours)
G.R.O.L. and Avionics Rules and Regulations
Grading Mode: Standard Letter
Transfer Credit: CSU.

Federal Communication Commission general radiotelephone operations license (G.R.O.L.) exam preparation. Federal Aviation Administration rules and regulations as they apply to the maintenance of avionic systems.

AMT A290 4 Units (36 lecture hours; 108 lab hours)
Helicopter Maintenance
Grading Mode: Standard Letter
Transfer Credit: CSU.

Maintenance of helicopters, helicopter rotor systems, power trains, unique system features, instrumentation, and design construction. Practical experience in dismantling, inspection, repair, assembly, testing, and troubleshooting a variety of helicopters and system components.