

AVIATION MAINTENANCE

*Effective Term – Fall 2001 [2001*03]*

AVI 110	Aviation Maintenance - General	10	15	15
Prerequisites:	None			
Corequisites:	None			

This course introduces general subjects related to all aspects of aircraft maintenance. Topics include mechanic privileges/limitations; math and physics; basic electricity; aircraft drawing; maintenance forms; fluid lines/fittings; weight and balance; corrosion control; and ground operations. Upon completion, students should be prepared to pass the FAA knowledge, oral, and practical exams for the general portion of the mechanic's certificate with either the airframe or powerplant ratings.

*Effective Term – Summer 1997 [1997*02]*

AVI 111	General Aviation Maint I	6	6	8
Prerequisites:	None			
Corequisites:	None			

This course introduces general aviation maintenance. Topics include aviation mathematics/physics, A/C drawings, forms and records, publications, materials and processes, and federal aviation regulations. Upon completion, students should be able to apply physics principles, use maintenance-related publications, and understand material processes and regulations relative to aviation maintenance.

*Effective Term – Summer 1997 [1997*02]*

AVI 112	General Aviation Maint II	6	12	10
Prerequisites:	None			
Corequisites:	None			

This course covers general aviation maintenance. Topics include basic electricity, fluid lines and fittings, weight and balance, corrosion, and ground operations and servicing. Upon completion, students should be able to understand electrical principles, fabricate lines, weigh aircraft, identify and repair corrosion, and operate and service aircraft.

*Effective Term – Summer 1997 [1997*02]*

AVI 113	Aviation Airframe Main I	6	9	9
Prerequisites:	AVI 111 and AVI 112			
Corequisites:	None			

This course covers components of aviation airframe maintenance. Topics include aircraft electrical systems, hydraulic and pneumatic systems, and landing gear systems. Upon completion, students should be able to successfully inspect, troubleshoot, and repair electrical, hydraulic, and landing gear systems.

*Effective Term – Summer 1997 [1997*02]*

AVI 114	Aviation Airframe Main II	4	6	6
Prerequisites:	AVI 111 and AVI 112			
Corequisites:	None			

This course covers components of aviation airframe maintenance. Topics include aircraft instrument systems, communication and navigation systems, cabin atmospheric controls, ice/rain control systems, and aircraft welding. Upon completion, students should be able to successfully weld airframes and inspect, troubleshoot, and repair instruments, communications/navigation equipment, atmospheric controls, and ice/rain systems.

*Effective Term – Summer 1997 [1997*02]*

AVI 115	Aviation Airframe Main III	6	9	9
Prerequisites:	AVI 111 and AVI 112			
Corequisites:	None			

This course covers components of aviation airframe maintenance. Topics include aircraft composite structures, fuel systems, sheet metal structures, woodworking, and fabric covering and finishing. Upon completion, students should be able to successfully inspect, apply, repair, and maintain structures on aircraft utilizing a variety of composite, fabric, and metal materials.

*Effective Term – Fall 2001 [2001*03]*

AVI 120	Airframe Maintenance I	6	18	12
Prerequisites:	AVI 110			
Corequisites:	None			

This course covers airframe structures, systems, and components with an emphasis on the different types of aircraft construction and repair methods. Topics include aircraft non-metallic (composite), sheet metal, and wood structures; welding; covering and finishes (dope and fabric); assembly and rigging; and communication and navigation systems. Students should gain the knowledge and skills in these areas to prepare them for the airframe rating for the FAA mechanic's certificate.

*Effective Term – Fall 2001 [2001*03]*

AVI 130	Aviation Maintenance II	6	9	9
Prerequisites:	AVI 110			
Corequisites:	None			

This course deals entirely with airframe systems and components. Topics include aircraft electrical, hydraulic, pneumatic, landing gear, position, warning, and fuel systems. Upon completion of the course, the student should be prepared to pass the applicable portions of the knowledge, oral and practical tests of the airframe rating for the FAA mechanic's certificate.

*Effective Term – Summer 1997 [1997*02]*

AVI 216	Aviation Airframe Main IV	4	9	7
Prerequisites:	AVI 113, AVI 114, and AVI 115			
Corequisites:	None			

This course is the final course covering components of aviation airframe maintenance. Topics include assembly and rigging, airframe inspection, fire protection, flight line servicing, and program review. Upon completion, students should be able to assemble and rig airframe components; inspect, maintain, and repair aircraft and fire systems; and complete review tests.

*Effective Term – Summer 1997 [1997*02]*

AVI 217	Aviation Pwrplnt Maint I	3	9	6
Prerequisites:	AVI 111 and AVI 112			
Corequisites:	None			

This course covers components of aviation powerplant maintenance. Topics include powerplant lubrication, fuel, fuel metering, induction, and cooling systems. Upon completion, students should be able to successfully inspect, troubleshoot, and repair powerplant lubrication, fuel, fuel metering, induction, and cooling systems.

*Effective Term – Summer 1997 [1997*02]*

AVI 218	Aviation Pwrplnt Maint II	6	9	9
Prerequisites:	AVI 111 and AVI 112			
Corequisites:	None			

This course covers components of aviation powerplant maintenance. Topics include turbine overhaul and inspection; reciprocating engine disassembly, inspection, and repair/assembly; and engine exhaust systems. Upon completion, students should be able to use precision measuring equipment in the maintenance, overhaul, and repair of aircraft engines and exhaust systems.

*Effective Term – Summer 1997 [1997*02]*

AVI 219	Aviation Pwrplnt Maint III	3	6	5
Prerequisites:	AVI 111 and AVI 112			
Corequisites:	None			

This course covers components of aviation powerplant maintenance. Topics include ignition systems and reciprocating engine operation and functional testing. Upon completion, students should be able to run aircraft engines; troubleshoot installations; and inspect, maintain, and repair ignition systems.

*Effective Term – Summer 1997 [1997*02]*

AVI 220	Aviation Pwrplnt Maint IV	6	9	9
Prerequisites:	AVI 217, AVI 218, and AVI 219			
Corequisites:	None			

This course is the final course in aviation powerplant maintenance. Topics include powerplant airworthiness inspection, instrumentation, electrical systems, fire protection, propellers, and program review. Upon completion, students should be able to complete review tests and inspect, maintain, and repair electrical systems, instrument and fire systems, and propellers.

*Effective Term – Fall 2001 [2001*03]*

AVI 230	Airframe Maintenance III	4	9	7
Prerequisites:	AVI 110			
Corequisites:	None			

In this final course of the airframe series, the emphasis is on systems and components, culminating with the airframe inspection portion of the course. In addition to the inspection aspects, instrument, cabin environmental control, fire protection, and ice and rain control systems are covered. The student should be prepared to take the applicable portions of the written, oral, and practical examination for the airframe rating on the FAA mechanic's certificate.

*Effective Term – Fall 2001 [2001*03]*

AVI 240	Powerplant Maintenance I	3	9	6
Prerequisites:	AVI 110			
Corequisites:	None			

This first course in the powerplant series covers theoretical and practical aspects of the two major types of aircraft propulsion systems, piston and jet engines. Auxillary power units are also covered, including their relationship to the systems they operate. Upon completion, the student should be knowledge of aircraft engines to include maintenance and operation at the level required by the FAA to qualify for a powerplant rating on a mechanic's certificate.

*Effective Term – Fall 2001 [2001*03]*

AVI 250 Powerplant Maintenance II

10	15	15
----	----	----

Prerequisites: AVI 110

Corequisites: None

This course emphasizes engine systems and components. Topics include engine instruments and fire protection, electrical, lubrication, fuel, ignition, starting, and fuel metering systems. Students completing this course should be capable of passing appropriate portions of the FAA knowledge, oral, and practical tests for the powerplant rating.

*Effective Term – Fall 2001 [2001*03]*

AVI 260 Powerplant Maintenance III

5	12	9
---	----	---

Prerequisites: AVI 110

Corequisites: None

This final course of the powerplant series covers engine systems and components; propellers and unducted fans, and induction, airflow, cooling, exhaust, and reverser systems. The course culminates with engine inspections. The student should be prepared to pass the applicable portions of the knowledge, oral and practical exams for the powerplant rating at the completion of this course.

See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.