

The course will cover unibody, frame measurement, and repair. This course also covers suspension and alignment repair. Safety will be emphasized throughout the course. Prerequisite: AUBO 125. Semester offered: Fall and Spring.

AUBO-236 Advanced Auto Body Repair II 9 cr.
The Auto Body student who has successfully completed AUBO 125 and AUBO 135 will be able to specialize in collision repair and/or automotive refinishing. This course is designed for the upgrading of a student's ability in the auto body field. Prerequisite: AUBO 135. Prerequisite or Corequisite: AUBO 235. Semester offered: Fall and Spring.

AUBO-240/241 Body Shop Management I and II 6 cr.
This course is offered to degree seeking and advanced auto body students. All phases of body shop management will be covered. Prerequisite: AUBO 235. Semester offered: Fall and Spring.

AUBO-280 Cooperative Education 1-18 cr.
Covers the industrial application of the auto body industry. Students will be supervised and evaluated jointly by the Director of Cooperative Education and the employer. Prerequisites: AUBO 235, AUBO 236, and WELD 237. Semester offered: Fall and Spring.

AUTOMOTIVE TECHNOLOGY

AUTE-111 Steering and Suspension 5 cr.
A theory and shop course to introduce the student to steering geometry, front and rear suspension service, wheel alignment, power steering service, and wheel balancing. Safety is emphasized. Corequisite: AUTE 112. Semester offered: Fall.

AUTE-112 Brakes 5 cr.
A study of the theory and diagnostic procedures of disc and drum brake systems, including anti-lock brakes. Instruction on machining of discs, drums, and rebuilding of brake hydraulic components will be given. Safety is emphasized. Corequisite: AUTE 111. Semester offered: Fall.

AUTE-113 Basic Electrical 4 cr.
Basic fundamentals of electrical theory, magnetism, current flow, Ohms Law, series, parallel, and series parallel circuit calculations. The use of basic meters and their application to circuit diagnosis will be taught. Safety is emphasized. Semester offered: Fall and Spring.

AUTE-114 Electrical Systems 6 cr.
Diagnosis of the general electrical system to include battery, starting, charging, lighting, gauges, horn, wiper/washer and accessories using meters and schematics with standard troubleshooting procedures. Prerequisites or Corequisite: AUTE 113. Corequisite: AUTE 117. Semester offered: Fall and Spring.

AUTE-115 Manual Drive Train and Transaxles 6 cr.
The theory and repair of manual transmission, differentials, clutches, transaxles and drive axles will be covered. Diagnosis and troubleshooting will be stressed. Safety is emphasized. Corequisite: AUTE 116. Semester offered: Spring.

AUTE-116 Auto Transmission and Transaxles 6 cr.
The operating principles of automatic transmissions, diagnosis, electrical and electronic controls, and repair will be covered. Safety is emphasized. Semester offered: Spring. Corequisite: AUTE 115.

AUTE-117 Engine Performance 12 cr.
This course will cover the use of engine performance test equipment, fuel system operation, fuel injection, ignition systems, starting and charging systems. A systematic method of troubleshooting will be taught. Safety is emphasized. Prerequisite: AUTE 113. Co/prerequisite: AUTE 114. Semester offered: Spring.

AUTE-118 Engine Repair 8 cr.
This course will cover the principles and operation of the internal combustion engine. Engines will be properly disassembled, inspected, measured, and reassembled. Safety is emphasized. Corequisite: AUTE 119. Semester offered: Fall.

AUTE-119 Heating and Air Conditioning 4 cr.
A theory and shop course to teach the student automotive air conditioning and heating systems as they apply to automotive vehicles. The use of test equipment will be emphasized and the student will learn to diagnose, evacuate, recover refrigerant and recharge air conditioning systems. Safety is emphasized. Co/prerequisite: AUTE 113. Corequisite: AUTE 118. Semester offered: Fall.

AUTE-280 Cooperative Education 1-9 cr.
The student will be employed at an approved work station which will provide relevant learning experiences that are directly related to the student's career and educational goals. The student will be supervised and evaluated jointly by his/her employer and San Juan College personnel. Semester offered: Fall and Spring.

AVIATION TECHNOLOGY

AVIA-110 Aviation Ground School 3 cr.
Covers the basic study of federal aviation regulations, meteorology, navigation, theory of flight, use of radar and general service of aircraft. Semester Offered: On Demand.

AVIA-120 Commercial Ground School 4 cr.
Covers the basic study of meteorology, navigation, theory of flight, use of radar, and the study of the aircraft power plant and general service of aircraft. Corequisite: AVIA 145. Semester offered: Fall, Spring and Summer.

AVIA-135 Airline Operations 3 cr.
Acquaints the student with the development and operation factors of airlines since passage of the Airline Deregulation Act of 1978. Topics include flight operations, operating specifications, types of services provided, domiciles, training, labor relations, communications and pertinent FARs specific to Mesa Air Group. Crew Resource Management concepts of communication, problem solving, group dynamic, work load management, and situational awareness will be stressed. Corequisite AVIA 145.

- AVIA-145 Private Flight Training** 4 cr.
A planned instructional course designed to prepare the student for his/her FFA Private Pilot Flight Exam. The student will receive instruction from a certified flight instructor and will have solo time. The course involves pre-briefing, actual flight, and de-briefing sessions. The student's performance will be evaluated by the flight instructor. Corequisite AVIA 120. Semester offered: Fall, Spring and Summer.
- AVIA-150 Canadair Regional Jet Systems** 4 cr.
This course will familiarize the student with the aircraft systems for the CRJ200. Includes overview of flight control, fuel, electrical, pneumatic, environmental, flaps, landing gear, and ice/rain protection systems. Prerequisite: AVIA 220. Corequisites AVIA 230, 240. Semester offered: Fall, Spring and Summer.
- AVIA-155 Aviation and Society** 3 cr.
Explores aviation and its impact on society. Semester offered: Fall, Spring and Summer.
- AVIA-160 Instrument Ground School** 3 cr.
A study of all areas pertaining to the FAA Instrument Pilot Written Exam. Instrument flying principles acquainting the student with the theory and logic that pertain to instrument flight will be covered. Includes weather interpretation, air traffic control procedures, and instrument flying procedures. Prerequisite: AVIA 120. Corequisite AVIA 135 and 170. Semester offered: Fall, Spring and Summer.
- AVIA-165 Advanced Instrument Ground School** 1 cr.
An intensive review of instrument procedures, techniques, and regulations with emphasis on Mesa Air Group requirements will be covered. Course content will include Jeppesen approach and en route charts, B-58 Baron aircraft instruments and interpretation, and proper communications procedures with air traffic control.
- AVIA-170 Instrument Flight I** 4 cr.
A planned instructional course designed to prepare the student to take and pass the FAA Instrument Pilot Flight Examination. Additional requirements will be completed in Instrument Flight II. The student's performance will be evaluated by a certified flight instructor. Prerequisite: AVIA 145. Corequisite: AVIA 135 and 160. Semester offered: Fall, Spring and Summer.
- AVIA-190 Instrument Flight II** 4 cr.
Designed to complete the flight work required for the student to receive FAA Instrument rating. This course is primarily designed to allow the student to build up solo, instrument, and cross-country flight hours. Prerequisite: AVIA 170; Corequisite: AVIA 220. Semester offered: Fall, Spring and Summer.
- AVIA-220 Advanced Commercial Ground School** 3 cr.
A study of all areas pertaining to the FAA Commercial Pilot Written Exam. The basic study of the F.A.R. governing operations, privileges, and limitations of a commercial pilot, to include accident reporting of the N.T.S.B., basic aerodynamics, and principles of flight, plus specific airplane operation, including use of flaps, retractable landing gear, controllable propellers, high altitude operations, load, balance computations, and aircraft performance charts will be covered. Includes jet aircraft systems and operations, and aerodynamics of high speed/high altitude aircraft will be undertaken. Prerequisite: AVIA 160; Corequisite: AVIA 190. Semester offered: Fall, Spring and Summer.
- AVIA-230 Commercial/Multi-Engine Flight Training** 4 cr.
This course is a planned instructional course designed to prepare the student for his/her FAA Commercial Flight Examination and Multi-Engine Flight Examination. The student will receive instruction from a certified flight instructor. The course involves pre-briefing, actual flight, and debriefing sessions. The student's performance will be evaluated by the flight instructor. Prerequisite: AVIA 190; Corequisite: AVIA 150, 240. Semester offered: Fall, Spring and Summer.
- AVIA-240 Multi-Engine Ground School** 3 cr.
This course covers the twin engine aircraft operated by Mesa Air Group and a basic study of all areas pertaining to the Air Transport Pilot Manual and a detailed study of the Federal Aviation Regulations as they apply for regional airlines will be undertaken. Prerequisite: AVIA 190, 220. Corequisite: AVIA 150, 230. Semester offered: Fall, Spring and Summer.
- AVIA-266 Meteorology for Pilots** 3 cr.
The basic study of meteorology which includes the earth's atmosphere and the elements that affect it, air masses and air mass modification, in-flight weather hazards, aviation weather reports, and weather forecasts will be offered. Corequisite: AVIA 120. Semester offered: Fall, Spring and Summer.
- AVIA-267 Introduction to Jet Training** 4 cr.
Introduces students to advanced glass technology and the automated flight deck. Aviation students will complete their final semester of training in the Ascent® Jet flight training device. The technology covered will include Flight Management Systems (FMS), Autopilot, and the Electronic Flight Information System (EFIS). Corequisite: AVIA 230. Semester offered: Fall, Spring and Summer.
- AVIA-270 Certified Flight Instructor Training** 3 cr.
Certified Flight Instructor Training prepares the student for his/her Certified Flight Instructor and Certified Flight Instructor-Instrument ratings. Course includes ground school training and flight training. Prerequisite: AVIA 230.
- AVIA-271 CFI Flight Training** 2 cr.
CFI Flight Training is planned instructional course designed to prepare the student (in coordination with AVIA 270) to take and pass the FAA Certified Flight Instructor Certificate. The course involves understanding the basic principles of the learning process and teaching methods including preparation and outlines of lesson plans, methods of evaluation and critiques. Prerequisites: AVIA 120, AVIA 220. Semester offered: On Demand.
- AVIA-275 Aviation Ground Instrument Pilot** 3 cr.
Course content includes weather interpretation, air travel control procedures, and instrument flying procedures. This course prepares the student for the FAA Instrument Pilot, Instrument Ground Instructor, and Instrument Flight instructor exams. Semester offered: Fall and Spring.