

proper diagnosis emphasized. Corequisite: ASEP 130. Prerequisite: ASEP 280. Semester offered: Spring.

ASEP-145 ASE Tests 1 cr.
Students must be signed up for a minimum of two ASE exams and pass one. Semester offered: Spring.

ASEP-146 ASE Tests 1 cr.
Take and pass remaining ASE exams. Students are required to pass a minimum of four ASE exams in order to receive credit and graduate. Any tests passed in ASEP 145 are counted as part of the requirement. Prerequisite: ASEP 145. Semester offered: Spring.

ASEP-150 GM Engines and Related System 4 cr.
This course covers the principles and operation of the internal combustion engine. Engines will be properly disassembled for component identification. All parts will be inspected, measured, and reassembled. The oiling and cooling system will also be covered. Corequisite: ASEP 160. Prerequisite: ASEP 281. Semester offered: Summer.

ASEP-160 GM Heating and Air Conditioning 2 cr.
A theory and shop course to teach the student GM heating, air conditioning systems, and controls. The student will learn to diagnose and recover refrigerant, evacuate, and recharge air conditioning systems. Corequisite: ASEP 150. Prerequisite: ASEP 281. Semester offered: Summer.

ASEP-170 GM Power Trains 8 cr.
The theory and practical application of automotive power trains, including clutches, transmissions, drive lines, transaxles and differential service will be taught. Diagnosis, troubleshooting and actual repair procedures will be performed on General Motors vehicles in the shop. Prerequisite: ASEP 160, ASEP 282. Semester offered: Fall.

ASEP-180 GM Brake Systems 4 cr.
A study of the theory, diagnosis and repair procedures of General Motors disc and drum brake systems will be taught. Instruction will be given on brake machining equipment, hydraulic systems and component replacement on traditional and anti-lock brake systems. Prerequisite: ASEP 170, ASEP 283. Corequisite: ASEP 190. Semester offered: Spring.

ASEP-190 GM Steering and Suspension 4 cr.
A theory and shop course to introduce the student to steering geometry, front and rear suspension service, wheel alignment, and wheel balancing. Lab work will include instruction on the latest GM vehicles' steering and suspension systems. Corequisite ASEP 180. Prerequisite: ASEP 283. Semester offered: Spring.

ASEP-280 GM Cooperative Work Education 4 cr.
The student will be employed at an approved General Motors automotive repair facility which will provide relevant learning experiences that are directly related to the student's most recent classroom/laboratory experiences. Daily logs and weekly reports MUST be submitted once per week. The student will be supervised and evaluated jointly by his/her employer and San Juan College personnel. Prerequisite: ASEP 120.

ASEP-281 GM Cooperative Work Education 4 cr.
The student will be employed at an approved General Motors automotive

repair facility which will provide relevant learning experiences that are directly related to the student's most recent classroom/laboratory experiences. Daily logs and weekly reports MUST be submitted once per week. The student will be supervised and evaluated jointly by his/her employer and San Juan College personnel. Prerequisite: ASEP 140.

ASEP-282 GM Cooperative Work Education 4 cr.
The student will be employed at an approved General Motors automotive repair facility which will provide relevant learning experiences that are directly related to the student's most recent classroom/laboratory experiences. Daily logs and weekly reports MUST be submitted once per week. The student will be supervised and evaluated jointly by his/her employer and San Juan College personnel. Prerequisite: ASEP 160.

ASEP-283 GM Cooperative Work Education 4 cr.
The student will be employed at an approved General Motors automotive repair facility which will provide relevant learning experiences that are directly related to the student's most recent classroom/laboratory experiences. Daily logs and weekly report MUST be submitted once per week. The student will be supervised and evaluated jointly by his/her employer and San Juan College personnel. Prerequisite: ASEP 170.

AUTO BODY

AUBO-110 Intro to Auto Body I 9 cr.
This course is a prerequisite to all auto body courses. Students will receive instruction in safety, hand tools, basic body shop equipment, oxy-acetylene, MIG welding, and basic panel alignment. Corequisite AUBO 115. Semester offered: Fall and Spring.

AUBO-113 Basic Electrical 9 cr.
Students will receive instruction in safety, body shop power tools, refinishing equipment, and basic auto body repair. Corequisite AUBO 110. Semester offered: Fall and Spring.

AUBO-120 Auto Body Electrical 4 cr.
This will consist of the theory of electricity and solid state electronics with emphasis on Ohm's Law. Meters, schematics, trouble shooting techniques, basic start, battery, and charging system tests will be covered. Semester offered: - Fall and Spring.

AUBO-125 Collision Repair 9 cr.
This course will involve the student in all phases of minor collision repair: sheet metal repair, body panel replacement, and help develop good, safe work habits for the student. Prerequisite: AUBO 115. Semester offered: Fall and Spring.

AUBO-135 Automotive Refinishing 9 cr.
Includes all phases of surface preparation and refinishing. Students will receive instruction on a variety of refinishing problems. The student will also be instructed on safe work habits, using base coat/clear coat systems. Prerequisite or corequisite AUBO 125. Semester offered: Fall and Spring.

AUBO-235 Advanced Auto Body Repair I 9 cr.
This course will involve the student in all phases of major collision repair.

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.