SOUTHEAST COMMUNITY COLLEGE
TRANSPORTATION OCCUPATIONS
AUTOMOTIVE SERVICE EDUCATIONAL PROGRAM (ASEP)
COURSE SYLLABUS
November 10, 2021

Syllabus Statements

I. CATALOG DESCRIPTION

Course Number: ASEP 1101
Course Title: GM Safety, Fundamentals, & MIT
Prerequisite: None

Catalog Description: This course introduces the fundamentals needed to be a productive maintenance technician in a General Motors service department including: automotive shop safety, GM service information, vehicle identification, repair order writing, hand tools, precision measuring, under-hood maintenance, inspection and service, under-vehicle maintenance inspection and service.

Credit Hours: 6.0
Class Hours: 38
Lab Hours: 158
Total Contact Hours: 196

II. COURSE OBJECTIVES: *Course will:*

A. Discusses the importance of safety and safe practices when working with basic automotive shop equipment and performing basic automotive shop procedures.
B. Provides an overview of General Motors Service Information for locating: vehicle/component identification information, diagnostic information, service procedures, and bulletins.
C. Overview of GM Global Connect and performing investigate vehicle history function.
D. Discusses the importance of accurate, detailed and complete Vehicle Repair Orders and ASEP program Weekly Work Reports including: Concern, Cause, Correction and Verification of the Repair. Includes General Motors labor time guides, flat rate manuals and technician pay.
E. Overview of precision measuring equipment such as micrometers, dial bore gages, and other special purpose gauges used for diagnosis, verification and component set up for GM repair procedures.
F. Discusses threaded and non-threaded fasteners, thread repair and torqueing principles. Includes principles of the torque-angle method and torque to yield bolts.
G. Overview of hand tools and proper usage, identification of General Motors special service tools and examples of usage.
H. Discussion of GM vehicle maintenance schedules, and vehicle inspections including: Under-hood Inspections, Chassis Inspections, Tire Inspections, Brake Inspections, and accurate assessment and completion of the General Motors Multi-Point Vehicle Inspection (MPVI) form.
I. Overview and importance of General Motors Pre-Delivery Inspections.

J. Overview of basic under-hood and under-vehicle component service including: basic brake component service, basic driveline component service, basic steering and suspension component service.

K. Overview of basic tire inspections, service and wheel balancing.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

A. STUDENT LEARNING OUTCOMES: *Student will be able to:*

1. Recognize the necessity for following school, transportation division and laboratory policies of SCC and the GM ASEP program.
2. Recognize the necessity for high-level performance in automotive service for customer satisfaction and the need for ongoing training and certifications within the automotive service industry and General Motors dealerships.
3. Complete a safety-training course including Mechanical Safety, Pollution Prevention and Ethics in the Automotive shop. Understand how their performance in these areas can affect the environment and people around them.
4. Locate vehicle identification and service information using GM Service Information. Analyze the information to determine those aspects, which are critical to a successful repair procedure.
5. Investigate Vehicle History using GM Global Connect to access past services performed and field service actions needed.
6. Demonstrate clear and concise writing of GM dealership repair orders and ASEP program weekly work reports to accurately convey the service or repair performed.
7. Demonstrate safe lifting of GM vehicles using a hoist, and jack and jack-stands. Identify potential hazards associated with inappropriate lifting and contact points according to General Motors Service Information.
8. Develop the skill to accurately perform measurements using precision measuring equipment. Analyze measurements for accuracy and determine condition of General Motors vehicle systems and components.
9. Identify threaded fasteners using bolt designations. Correlate bolt size and hardness to specified torque ranges, perform bolt torqueing, torque-angle, and thread repair procedures referencing General Motors Service Information.
10. Identify hand tools, GM special service tools and their usage. Identify potential damage to components when not using a tool properly for the stated procedure.
11. Complete a Hand Tool Project in a professional and workman-like manner.
12. Recognize the necessity for GM vehicle maintenance schedules and inspections in GM Service Information, and potential ramifications of improper inspections and maintenance for vehicle operation and impact on passenger safety.
13. Perform Multi-Point Vehicle Inspections using the GM MPVI form, analyze the results to determine needed service and repair.
14. Perform inspections: automotive fluids, underhood, behind the wheel, cooling system, HVAC system, steering and suspension, drivetrain, brakes, battery and tires on General Motors vehicles and determine needed service.
15. Perform basic component service: under-hood components, behind the wheel, cooling system components, HVAC system, steering and suspension components, drivetrain components, brakes, battery and tires.
16. Perform wheel/road force balancing. Analyze findings to determine needed wheel or tire replacement, match-mounting and balancing to ensure a round and well-balanced assembly for GM vehicles.

B. GENERAL EDUCATION LEARNING OUTCOMES:
GELO #3: Critical Thinking and Problem Solving
Outcome:
1. Collect, identify interpret and analyze data.

IV. CONTENT/TOPICAL OUTLINE

A. GM ASEP shop procedures and safety
B. General Motors service information
C. GM Global Connect investigate vehicle history
D. Vehicle repair orders, ASEP weekly work reports, labor time, technician pay
E. Vehicle lifting: vehicle hoists, floor jacks and jackstands
F. Precision measuring
G. Threaded and non-threaded fasteners
H. Hand tools and special service tools
I. GM vehicle maintenance schedules and Inspections
J. GM pre-delivery inspections
K. Hand tool project
L. Basic GM maintenance inspections
M. Basic GM maintenance service
N. Wheel and tire balancing principles

V. INSTRUCTIONAL MATERIALS

The Course Information Document lists the current text(s) required for this class. The list is also available in the campus bookstore. The Course Information Document also lists the tools/equipment or other supplies required for this class.

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:
1. Lecture
2. Small and large group discussion
3. Video presentation
4. Demonstrations
5. Project boards
6. Handouts
7. Observations
8. Assigned lab projects
9. Online information
10. Field trips

VII. METHODS OF EVALUATION

A. Methods of evaluation typically include a combination of the following:
1. Notebook (if required)
2. Quizzes
3. Tests
4. Lab grades
5. Attendance/class conduct

Letter grades will be based on the SCC Standard Grade Scale Policy. **Note:** See Course Information Document for specific details on how the course grades will be calculated.

VIII. SPECIFIC COURSE REQUIREMENTS

A. Student must:

1. Complete all tests, projects, assignments, and notebook (if required).
2. Earn a final grade of 70% (2.0) or higher.

B. Attendance:

1. Students must following the Attendance Policy as stated in the college student handbook, automotive lab and classroom policies handbook or Course Information Document.

C. Shop safety rules will be followed.

D. Any additional course requirements as stipulated by the Instructor.