

# Automotive Technology (GM-ASEP Option)

65-credit Associate of Applied Science Degree

## About the Program

WCTC and the General Motors Corporation are pleased to offer the General Motors - Automotive Service Educational program (GM-ASEP). This unique program combines the learning resources at WCTC with “real world” job experience at GM dealerships and ACDelco Total Service Support (TSS) centers. This partnership provides students the technical competency and professional ability to become highly qualified service technicians in a satisfying, rewarding and growth-oriented career.

Throughout the two-year program, students alternate on-campus learning time with co-op work experience at a sponsoring GM dealership or AC Delco/TSS independent shop. In the WCTC classrooms and labs, students learn to analytically diagnose, service and maintain GM products using GM technical publications, recommended procedures and state-of-the-art equipment and tools. Students train using the latest GM vehicles, components and educational materials available. While at the worksite, qualified technicians act as mentors to demonstrate and reinforce skills and tasks learned on-campus. In the classroom, labs and worksite, training will cover the latest developments of GM technology including engines, fuel management, electronics, transmissions/transaxles and drives, and brakes.

## Potential Job Titles

- Automotive Technician
- Auto Mechanic
- Service Technician

## Credit Transfer

Credits earned in the Automotive Technology program may be transferable to institutions offering baccalaureate degrees. Visit [www.wctc.edu/transfer](http://www.wctc.edu/transfer) for specific information. Since the details of credit transfers change from time to time, be sure to contact the intended college or university to verify credit transferability.

Required Courses	Credits
<b>First Semester</b>	
602-100 Automotive Fundamentals	2
602-110 Electrical Systems & Power Accessories	4
602-180 Electronic Accessories	2
602-190 Co-op Dealership Experience I	1
801-195 Written Communication	3+
804-115 College Technical Math I	5+
<b>Total semester credits</b>	<b>17</b>
<b>Second Semester</b>	
602-143 Fuel Management I	4
602-170 Automotive Brakes	3
602-191 Co-op Dealership Experience II	1
806-139 Survey of Physics	3
809-199 Psychology of Human Relations	3
<b>Total semester credits</b>	<b>14</b>
<b>Summer Term</b>	
602-150 Automotive Temperature Control	2
602-192 Co-op Dealership Experience III	1
<b>Total term credits</b>	<b>3</b>
<b>Third Semester</b>	
602-130 Alignment/Suspension/Steering	3
602-144 Fuel Management II	2
602-145 Fuel Management III	2
602-193 Co-op Dealership Experience IV	1
801-196 Oral/Interpersonal Communication	3+
801-197 Technical Reporting	3
<b>Total semester credits</b>	<b>14</b>
<b>Fourth Semester</b>	
602-120 Engine Concepts	4
602-148 Automotive Computer Appl	3
602-162 Manual Transmissions & Drives	3
602-163 Auto Transmissions & Drives	3
602-194 Co-op Dealership Experience V	1
809-195 Economics	3+
<b>Total semester credits</b>	<b>17</b>
+ Proficiency exam available	
<i>Curriculum is current as of catalog printing. The most current curriculum requirements for graduation will be provided upon admission to program, or review at <a href="http://www.wctc.edu">www.wctc.edu</a>.</i>	

## Admission Process

- Fill out a WCTC application
- Send \$30 non-refundable application fee
- Send high school transcript or GED/HSED
- Send any previous college transcripts
- Complete Skills Assessment test (COMPASS)
- Begin pursuing Financial Aid/Scholarship options
- Requires service center sponsorship prior to admissions

- Select high school courses may qualify the student for advance standing in this program
- Students are responsible to purchase and have available their own tools, toolboxes, safety glasses and safety shoes

For more information, call 262.691.5200.

**Automotive Technology (GM-ASEP Option)  
Required Courses**

**602-100 Automotive Fundamentals** 2  
Build a foundation for subsequent automotive courses, and develop the basic concepts needed for the program.

**602-110 Electrical Systems & Acc** 4  
Become familiar with the fundamental theories of electricity and electronics and apply these fundamentals in the operation of the various automotive systems. Study meter usage and sound diagnostic procedures.  
Prerequisites: 602-100 Automotive Fundamentals (or concurrent) or 602-121 Engine Fundamentals (or concurrent)

**602-120 Engine Concepts** 4  
Explore the operating principles and construction of the automotive internal combustion engine, focusing on cylinder head repair, valve timing, and proper assembly techniques. Learn engine removal and replacement techniques.  
Prerequisites: 602-100 Automotive Fundamentals

**602-130 Alignment/Suspension/Steering** 3  
Participate in the inspection, diagnosis and repair of automotive steering and suspension systems. Demonstrate wheel alignment procedures and related steering and suspension system service. Hands-on experience will be gained in power and manual steering gears and comprehensive training in wheel mounting and balancing.  
Prerequisites: 602-100 Automotive Fundamentals (or concurrent) or 405-100 Auto Collision Fundamentals (or concurrent)

**602-143 Fuel Management I** 4  
Study the basic principles of carburetion, ignition, and emission control systems (basic computer command control). Microprocessor control systems will be emphasized in this study of fuel emission control systems.  
Prerequisites: 602-100 Automotive Fundamentals (or concurrent) or 602-121 Engine Fundamentals (or concurrent) and 602-110 Electrical Systems & Acc (or concurrent) and 602-180 Electronic Accessories (or concurrent)

**602-144 Fuel Management II** 2  
Enhance understanding of solid-state electronics as they apply to engine electrical systems. Explore the operation of electronic fuel injection systems.  
Prerequisites: 602-143 Fuel Management I

**602-145 Fuel Management III** 2  
Examine the function, diagnosis, and service of past fuel injections systems (gas and diesel). Complete a study of injectors, fuel distribution, and fuel injection pumps.  
Prerequisites: 602-144 Fuel Management II (or concurrent)

**602-148 Automotive Computer Appl** 3  
Gain an understanding of computer concepts and the components of ASE testing and manufacturer certification. Participate in CD Rom training for their individual certification standards.  
Prerequisites: 602-190 Co-Op Dealership Experience I (or concurrent)

**602-150 Automotive Temperature Control** 2  
Study the theory, operation, maintenance, and repair of all late model air conditioning systems, including intricately designed systems that are controlled by the computer.  
Prerequisites: 602-110 Electrical Systems & Acc (or concurrent) or 404-332 Automotive Electrical Systems (or concurrent) or 405-135 Collision Repair Electronics (or concurrent)

**602-162 Manual Transmissions & Drives** 3  
Obtain the skills required to diagnose, service and repair automotive manual drive-trains. This includes clutch diagnosis and repair, transmission/transaxle diagnosis, service and repair and driveshaft, drive axle and differential operation and repair. Personal safety will be stressed as well as working with hazardous materials.  
Prerequisites: 602-100 Automotive Fundamentals (or concurrent)

**602-163 Auto Transmissions & Drives** 3  
Diagnose, service and repair automotive automatic transmissions and transaxles. This includes hydraulic fundamentals, torque converter operation and service, basic computer and electronic control systems, inspection, testing and diagnosis and transmission disassembly, service and repair. Personal safety will be stressed as well as working with hazardous materials.  
Prerequisites: 602-100 Automotive Fundamentals (or concurrent)

**602-170 Automotive Brakes** 3  
Service drum and disc brake systems and be introduced to power brakes, both vacuum and hydra-boost types. In addition, use scan tools as a diagnostic technique for anti-lock brake system problems and other brake-related issues  
Prerequisites: 602-100 Automotive Fundamentals (or concurrent) or 405-100 Auto Collision Fundamentals (or concurrent)

**602-180 Electronic Accessories** 2  
Examine the electronic accessories, such as electronic instrumentation and cruise control, found on today's automobile.  
Prerequisites: 602-110 Electrical Systems & Acc (or concurrent)

**602-190 Co-Op Dealership Experience I** 1  
Take part in a period of involved employment, guided by an organized student learning plan, in the automotive field.  
Prerequisites: 602-100 Automotive Fundamentals (or concurrent) or 602-121 Engine Fundamentals (or concurrent)

**602-191 Co-Op Dealership Experience II** 1  
Take part in a period of involved employment, guided by an organized student learning plan, in the automotive field.  
Prerequisites: 602-190 Co-Op Dealership Experience I

**602-192 Co-Op Dealer Exp III** 1  
Take part in a period of involved employment, guided by an organized student learning plan, in the automotive field.  
Prerequisites: 602-191 Co-Op Dealership Experience II

**602-193 Co-Op Dealership Experience IV** 1  
Take part in a period of involved employment, carried out through an organized student learning plan, in the automotive field.

**602-194 Co-Op Dealership Experience V** 1  
Continue a period of involved employment carried out through an organized student learning plan which allows for meaningful occupational experience in the automotive field.

**801-195 Written Communication** 3  
Study and practice the transfer of information, ideas, and experiences in written form through reports, letters, memoranda, and other documents. Gain proficiency in the areas of organization, clarity, accuracy, and directness.  
Prerequisites: COMPASS-Writing Skills or ACT-English or ASSET-Writing Skills or Accuplacer Sentence Skills or TABE Advanced Language or 831-103 Intro to College Writing or 851-771 Writing-Program Readiness

**801-196 Ora/Interpersonal Comm** 3  
Practice the necessary skills for effective speech delivery, listening, assertiveness, conflict resolution, teamwork, and general interpersonal communication.

**801-197 Technical Reporting** 3  
Prepare and present oral and written technical reports. Analyze the problems particular to technical writing, and study the methods used in assembling, developing, and preparing information for technical publications. Discuss the competencies required of the qualified technical communicator.  
Prerequisites: 801-195 Written Communication

**804-115 College Technical Math I** 5  
Topics include: solving linear, quadratic, and rational equations; graphing; formula rearrangement; solving systems of equations; percent; proportions; measurement systems; computational geometry; right and oblique triangle trigonometry; trigonometric functions on the unit circle; and operations on polynomials. Emphasis will be on the application of skills to technical problems. This course is the equivalent of successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B.

**806-139 Survey of Physics** 3  
Emphasis is on understanding basic physics concepts through laboratory investigation and applications. Topics include kinematics, dynamics, work, energy, power, temperature, heat, waves, electricity, magnetism, electromagnetic waves, optics, and atomic and nuclear physics.  
Prerequisites: 804-115 College Technical Math I or 804-151 Technical Math I or 804-170 Math for Electronics or 804-110 Elem Algebra w Apps (or concurrent) or 804-106 Intro to College Math (or concurrent)

**809-195 Economics** 3  
Discuss the major institutions and principles that underlie the contemporary American economic system, and consider topics such as the free enterprise system, supply and demand, circular flow, government involvement, the Federal Reserve System, economic growth and development, the effects of international trade, comparative economic systems, and global economics.  
Prerequisites: COMPASS-Reading Skills or 858-775 Reading - Program Readiness or 838-105 Intro Reading & Study Skills or TABE Advanced Reading or Accuplacer Reading Comprehensi or College Proficiency - Reading or Grandfathered Rdg Requirement or ACT-Reading

**809-199 Psychology of Human Relations** 3  
Examine the principles of interaction as applied to human relations at home and on the job. Explore topics such, as self concept personality development, learning, motivation, emotions, stress, human relations processes, and special relationships.  
Prerequisites: COMPASS-Reading Skills or 858-775 Reading - Program Readiness or 838-105 Intro Reading & Study Skills or TABE Advanced Reading or Accuplacer Reading Comprehensi or College Proficiency - Reading or Grandfathered Rdg Requirement or ACT-Reading