



Automotive Technology

Degree and Certificate Career programs

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Students interested in the automotive field may choose from three programs, each addressing a different approach to this area.

The Certificate program is offered primarily to prepare students for employment in the service segment of the automotive industry. Occupational titles include, among others: line mechanic, service station mechanic, auto parts clerk. Courses focus on the fundamental systems of the automobile: cooling and heating, electrical, suspension, brakes, exhaust and emission controls. Hands-on experience is emphasized. Students spend 18 hours per week in the fall semester and 14 hours per week in the spring semester in automotive-related laboratories developing the necessary manual skills to enter this occupation. During the second semester, students take one ASE exam of their choice.

The A.A.S. degree program in Automotive Technology is a four-semester sequence designed to prepare students for a career in the automotive field or for transfer to a vocational-technical program. Career opportunities include positions as automotive technicians, service managers, shop supervisors, specialty technicians, as well as other support functions associated with automotive and industrial manufacturers. In addition, the general education courses may qualify graduates for supervisory positions dealing directly with customer relations, sales, or factory representatives. Students who transfer for a bachelor's degree can become qualified to teach in a variety of vocational-technical programs.

The A.O.S. degree program is certified by the National Institute for Automotive Service Excellence in the areas of brakes, electrical systems, engine performance, and suspension and steering. Graduates completing the program are prepared to take any one of these ASE certification examinations. Students are required to take at least two of the certification tests prior to graduation. This degree program is a four-semester curriculum consisting of 58 credit hours of automotive-related courses. It provides students with an opportunity to acquire skills in specialized phases of the automotive service industry unavailable to students in the Certificate or A.A.S. degree programs. In addition to a year's sequence in autobody repair, courses in automotive electronics, diagnostic computer utilization, automatic and manual transmissions, engine rebuilding, electronic ignitions and fuel systems are required. This training program culminates in an automotive practicum that gives the student an opportunity to work and learn under the supervision of the faculty. Career opportunities encompass all phases of the automotive service industry. Some of the job titles include master line mechanic, autobody repair specialist, transmission and engine diagnosis technician and computerized systems analyst.

Graduates will be able to service the following automotive systems: cooling, air conditioning, electrical, suspension, brake, exhaust, fuel, and emission control; diagnose microprocessor controls, major engine/drive train systems; demonstrate the use of industry safety standards; understand project management techniques; and understand basic automotive history and language.

The automotive facilities are located on campus and at CCC's Airport Corporate Park facility in Big Flats. Students will be required to purchase a prescribed list of hand tools at the beginning of the program. Students should see their advisor for a detailed tool list.

After evaluation by CCC's faculty, students with BOCES training may receive advanced standing. Students who have graduated from the Certificate program and elect to enter the A.O.S. degree program can complete the additional requirements in one academic year. Those selecting the A.A.S. degree program will usually need three additional semesters of academic work.

In order to participate in any automotive lab, a student must maintain a valid automobile driver's license. For program assistance, students should consult their advisor.

Automotive Mechanics, Certificate

High school or equivalent preparation required: No special requirements.

Program Requirements

Technical Concentration (ABOD 1010 or 1510; AUTO 1000,

1010, 1090, 1410, 1420, 1510, 1520, 1540)..... 34

Total hours 34

While not specific program requirements, in order to graduate from this program, students must demonstrate the writing skills necessary to enter ENGL 1010, College Composition I, and the math skills necessary to enter MATH 1015, Introductory Algebra. Based on assessment, students may need to successfully complete ENGL 0950, Basic Writing Skills, and MATH 0960, Basic Mathematics Skills, to fulfill the graduation requirement. It is essential that students discuss this with their advisors.

Sample Sequence: intended as a guide for academic planning. It need not be followed exactly or completed in two semesters.

First Semester

Auto Lab I (AUTO 1000) 4
 Introduction to Automotive Technology (AUTO 1010) 3
 Automotive Electronics I (AUTO 1410) 4
 Fuel Systems I (AUTO 1420) 4
 Autobody I (ABOD 1010 or 1510) 4

Second Semester

Chassis and Alignment Lab (AUTO 1540) 4
 Automotive Chassis (AUTO 1090) 3
 Automotive Electronics II (AUTO 1510) 4
 Fuel Systems II (AUTO 1520) 4



Automotive Technology, Associate in Applied Science Degree

High school or equivalent preparation required: Two years of mathematics including algebra and either geometry or intermediate algebra. Students who don't have this preparation will be able to get it here, but it will take longer to complete the program.

Program Requirements

English (ENGL 1010 and 1020 or 1030. By placement)*	6	Technical Concentration (AUTO 1000, 1010, 1090, 1410, 1420, 1510, 1520, 1540, 2130 or 2190, 2210)	38
Mathematics (MATH 1230-1240 or higher)*	6	Free elective	3
Social Sciences electives	6	Wellness	2
Physics (PHYS 1010)	4	Total hours	65

*Based on placement, students may be required to take ENGL 0950 before taking ENGL 1010, and MATH 0960 before taking a math credit course.

Sample Sequence: intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.

First Semester

English	3
Mathematics (MATH 1230)	3
Auto Lab I (AUTO 1000)	4
Introduction to Automotive Technology (AUTO 1010)	3
Automotive Electronics I (AUTO 1410)	4
Wellness (Awareness/Instructional Component)	1

Second Semester

English	3
Mathematics (MATH 1240)	3
Chassis and Alignment Lab (AUTO 1540)	4
Automotive Electronics II (AUTO 1510)	4
Automotive Chassis (AUTO 1090)	3
Wellness (Activity Component)	0.5

Third Semester

Social Sciences elective	3
Internal Combustion Engine (AUTO 2130) or Power Transmissions (AUTO 2210)	4
Electronic Engine Controls (AUTO 2190)	4
Fuel Systems I (AUTO 1420)	4
Wellness (Activity Component)	0.5

Fourth Semester

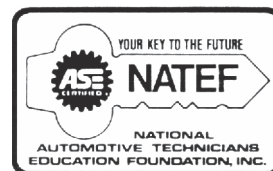
Social Sciences elective	3
Physics (PHYS 1010)	4
Fuel Systems II (AUTO 1520)	4
Free elective	3

Automotive Technology, Associate in Occupational Studies Degree

High school or equivalent preparation required: No special requirements.

Program Requirements

Automotive courses: (ABOD 1010, 1510; AUTO 1000, 1010, 1090, 1410, 1420, 1510, 1520, 1540, 2130, 2140, 2190, 2210, 2960)	58
Free electives	9
Total hours	67



While not specific program requirements, in order to graduate from this program students must demonstrate the writing skills necessary to enter ENGL 1010, College Composition I, and the math skills necessary to enter MATH 1015, Introductory Algebra. Based on assessment, students may need to successfully complete ENGL 0950, Basic Writing Skills, and MATH 0960, Basic Math Skills, to fulfill the graduation requirement. It is essential to discuss this with an advisor.

Sample Sequence: intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.

First Semester

Auto Lab I (AUTO 1000)	4
Introduction to Automotive Technology (AUTO 1010)	3
Automotive Electronics I (AUTO 1410)	4
Fuel Systems I (AUTO 1420)	4

Second Semester

Chassis and Alignment Lab (AUTO 1540)	4
Automotive Chassis (AUTO 1090)	3
Automotive Electronics II (AUTO 1510)	4
Fuel Systems II (AUTO 1520)	4

Third Semester

Internal Combustion Engines (AUTO 2130)	4
Electronic Engine Controls (AUTO 2190)	4
Power Transmissions (AUTO 2210)	4
Auto Body I (ABOD 1010)	4
Free elective	3

Fourth Semester

Drivability (AUTO 2960)	4
Auto Refinishing (ABOD 1510)	4
Automotive Practicum (AUTO 2140)	4
Free electives	6