Automotive Service Management Technologies

Automotive Service Management (ASM)

The Automotive Service Management program includes co-op education at local automotive service companies as well as classroom instruction. These experiences help students develop the knowledge and technical skills that are essential for success in any avenue of the automotive work force. Graduates of the program earn an Associate of Applied Business degree, and are prepared to take certification exams offered by the National Institute for Automotive Service Excellence (ASE).

Automotive Service Technician Certificate (ASTCT)

The Automotive Service Technician Certificate at Cincinnati State prepares students for entry-level jobs in the technical areas of the automotive service field. Hands-on diagnosis and repair of “live” vehicles enhance students’ diagnostic skills and build a solid foundation for a successful and rewarding career. Graduates of the certificate program are prepared to take certification exams offered by the National Institute for Automotive Service Excellence (ASE).

For more information, please contact the Business Technologies Division at (513) 569-1620.

Automotive Service Management (ASM)

Semester 1		**Lec**	**Lab**	**Credits**
AUTO 100	Introduction to Automotive Technology (**B**)	2	3	3
IM 111	Computer Applications 1 (**B**)	2	3	3
AUTO 111	Engine Repair 1 (**T**)	2	3	3
AUTO 161	Electrical/Electronic Systems 1 (**T**)	2	3	3
ENG 101	English Composition 1 (**G**)	3	0	3
FYE 1XX First Year Experience Elective (**B**)		1	0	1
Semester 2				
AUTO 150	Brakes (**T**)	2	3	3
AUTO 162	Electrical/Electronic Systems 2 (**T**)	2	3	3
AUTO 181	Engine Performance 1 (**T**)	2	3	3
ENG 10X English Composition Elective (**G**)		3	0	3
BUS 190	Professional Practices (**B**)	1	0	1
MAT 1XX Mathematics Elective (**G**)		3	0	3
Semester 3				
AUTO 291	Full-Time Cooperative Education 1: Automotive (**T**)	1	40	2
Semester 4				
LAW 101	Business Law (**B**)	3	0	3
AUTO 140	Suspension and Steering (**T**)	2	3	3
AUTO 175	Powertrain Systems and Service (**T**)	2	3	3
MGT 101	Principles of Management (**B**)	3	0	3
ACC 101	Financial Accounting (**B**)	3	0	3
Semester 5				
AUTO 292	Full-Time Cooperative Education 2: Automotive (**T**)	1	40	2
Semester 6				
AUTO 170	Heating and Air Conditioning (**T**)	2	3	3

AUTO 182	Engine Performance 2 (**T**)	2	3	3
XXX XXX Arts/Humanities Elective (**G**)		3	0	3
XXX XXX Social/Behavioral Science Elective (**G**)		3	0	3
Total Credits:		50	113	63

Electives

First Year Experience Elective		
FYE 100	College Survival Skills	1
FYE 105	College Success Strategies	2
FYE 110	Community College Experience	3
English Composition Elective		
ENG 102	English Composition 2: Contemporary Issues	3
ENG 103	English Composition 2: Writing about Literature	3
ENG 104	English Composition 2: Technical Communication	3
ENG 105	English Composition 2: Business Communication	3
Mathematics Elective		
MAT 105	Quantitative Reasoning for the Sciences	3
MAT 111	Business Mathematics	3
MAT 120	Technical Mathematics	3
Arts/Humanities Elective		
Any Transfer Module course from ART, LIT, MUS, PHI, REL, THE, or COMM 130		
Social/Behavioral Science Elective		
Any Transfer Module course from ECO, GEO, HST, LBR, POL, PSY, SOC		

Automotive Service Technician Certificate (ASTCT)

Automotive Service Technician Certificate

Semester 1		**Lec**	**Lab**	**Credits**
AUTO 100	Introduction to Automotive Technology	2	3	3
AUTO 111	Engine Repair 1	2	3	3
AUTO 150	Brakes	2	3	3
AUTO 161	Electrical/Electronic Systems 1	2	3	3
AUTO 181	Engine Performance 1	2	3	3
Semester 2				
AUTO 140	Suspension and Steering	2	3	3
AUTO 162	Electrical/Electronic Systems 2	2	3	3
AUTO 170	Heating and Air Conditioning	2	3	3
AUTO 182	Engine Performance 2	2	3	3
Total Credits:		18	27	27

Faculty

Program Chair

Charles Butler, BA, ASE-MCT
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Co-op Coordinator

Brian Hooten, MAOL

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Advisor

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Courses

AUTO 100 Introduction to Automotive Technology
3 Credits. 2 Lecture Hours. 3 Lab Hours.
A course on foundation concepts of the automotive industry. Topics include: safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automotive maintenance.
Prerequisites: None

AUTO 111 Engine Repair 1
3 Credits. 2 Lecture Hours. 3 Lab Hours.
A course on internal combustion engines. Topics include: engine classification, disassembly, inspection, measurement and identification of parts, failure analyses, reassembly, and tools and procedures used in the engine rebuilding process.
Prerequisites: AUTO 100

AUTO 112 Engine Repair 2
3 Credits. 2 Lecture Hours. 3 Lab Hours.
A continuation of AUTO 111, emphasizing replacing a complete engine and replacing an engine with short or long blocks. Topics include: engine cooling systems, timing chain and belt replacement, valve adjustment, internal and external leak repair, and engine noise diagnosis.
Prerequisites: AUTO 111

AUTO 120 Automatic Transmission and Transaxle
3 Credits. 2 Lecture Hours. 3 Lab Hours.
A course on operation, diagnosis, service, and repair of automatic transmissions and transaxles. Topics include: transmission pressure testing; scan tool testing; transmission replacement, disassembly, and reassembly; inspection of parts; and troubleshooting various systems.
Prerequisites: AUTO 100 and AUTO 161

AUTO 130 Manual Drive Train and Axles
3 Credits. 2 Lecture Hours. 3 Lab Hours.
A course on operation, diagnosis, service, and repair of manual transmissions, transaxles, and drivelines. Topics include: clutch, driveshaft, universal joint, constant velocity joint, final drive, transfer case, and locking hub assemblies.
Prerequisites: AUTO 100 and AUTO 161

AUTO 140 Suspension and Steering
3 Credits. 2 Lecture Hours. 3 Lab Hours.
A course on operation, diagnosis, service, and repair of steering and suspension systems. Topics include: wheels and tires, front and rear suspension systems for front-wheel drive and rear-wheel drive vehicles, and wheel alignment angles.
Prerequisites: AUTO 100 and AUTO 161

AUTO 150 Brakes
3 Credits. 2 Lecture Hours. 3 Lab Hours.
A course on operation, diagnosis, service, and repair of automotive braking systems. Topics include: hydraulic, mechanical, and anti-lock braking systems; power assist units; and machine operations of drums and rotors.
Prerequisites: AUTO 100 and AUTO 161

AUTO 161 Electrical/Electronic Systems 1
3 Credits. 2 Lecture Hours. 3 Lab Hours.
A course on systematic diagnosis and repair of basic automotive electrical circuits. Topics include: Ohm's law, interpreting wiring schematics, step-by-step testing procedures, starting and charging systems, and automotive component testing.
Prerequisites: None

AUTO 162 Electrical/Electronic Systems 2
3 Credits. 2 Lecture Hours. 3 Lab Hours.
A continuation of AUTO 161. Topics include: wiring schematic interpretation, diagnosis, and repair of driver information systems, cruise control systems, motor driven accessories, heated glass, and electronic body control systems.
Prerequisites: AUTO 100 and AUTO 161

AUTO 170 Heating and Air Conditioning
3 Credits. 2 Lecture Hours. 3 Lab Hours.
A course on diagnosis, service, and repair of automotive air conditioning and heating systems. Topics include: performance testing, pressure and leak testing, electrical and mechanical controls, compressors, clutches, safety devices, and ozone-safe service.
Prerequisites: AUTO 100 and AUTO 161

AUTO 175 Powertrain Systems and Service
3 Credits. 2 Lecture Hours. 3 Lab Hours.
A course on assessment and replacement of major powertrain components. Topics include: procedures for replacing and servicing engines, drivetrain components, automatic transmissions, manual transmissions, and differentials.
Prerequisites: AUTO 100 and AUTO 111 and AUTO 161
Instructor Consent Required

AUTO 181 Engine Performance 1
3 Credits. 2 Lecture Hours. 3 Lab Hours.
A course on engine performance diagnostics and fuel injection and ignition systems. Topics include: evaluation of basic engine mechanical system through vacuum, cylinder power balance, compression, and cylinder leakage testing.
Prerequisites: AUTO 111 and AUTO 161

AUTO 182 Engine Performance 2
3 Credits. 2 Lecture Hours. 3 Lab Hours.
A continuation of AUTO 181. Topics include: On-Board Diagnostics systems, scan tools that retrieve diagnostic codes and data, diagnostic flow charts, and testing and replacing computer sensor inputs and computer-controlled output components.
Prerequisites: AUTO 181

AUTO 191 Part-Time Cooperative Education 1: Automotive
1 Credit. 1 Lecture Hour. 20 Lab Hours.
Students seeking an associate's degree participate in their first part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: BUS 190

AUTO 192 Part-Time Cooperative Education 2: Automotive
1 Credit. 1 Lecture Hour. 20 Lab Hours.
Students seeking an associate's degree participate in their second part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: AUTO 191

AUTO 193 Part-Time Cooperative Education 3: Automotive
1 Credit. 1 Lecture Hour. 20 Lab Hours.
Students seeking an associate's degree participate in their third part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: AUTO 192

AUTO 194 Part-Time Cooperative Education 4: Automotive
1 Credit. 1 Lecture Hour. 20 Lab Hours.
Students seeking an associate's degree participate in their fourth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: AUTO 193

AUTO 195 Part-Time Cooperative Education 5: Automotive
1 Credit. 1 Lecture Hour. 20 Lab Hours.
Students seeking an associate's degree participate in their fifth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: AUTO 194

AUTO 196 Part-Time Cooperative Education 6: Automotive
1 Credit. 1 Lecture Hour. 20 Lab Hours.
Students seeking an associate's degree participate in their sixth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: AUTO 195

AUTO 198 First Year Special Topics in Automotive
1-9 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Automotive, which gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.
Prerequisites: Vary by section

AUTO 199 First Year Independent Project in Automotive
1-9 Credits. 0 Lecture Hour. 0 Lab Hour.
A project related to Automotive that is completed by one or more students to meet specific educational goals. Projects must have prior approval and supervision by Automotive faculty. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: Vary by section

AUTO 291 Full-Time Cooperative Education 1: Automotive
2 Credits. 1 Lecture Hour. 40 Lab Hours.
Students seeking an associate's degree participate in their first full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: BUS 190

AUTO 292 Full-Time Cooperative Education 2: Automotive
2 Credits. 1 Lecture Hour. 40 Lab Hours.
Students seeking an associate's degree participate in their second full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: AUTO 291

AUTO 293 Full-Time Cooperative Education 3: Automotive
2 Credits. 1 Lecture Hour. 40 Lab Hours.
Students seeking an associate's degree participate in their third full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: AUTO 292

AUTO 298 Second Year Special Topics in Automotive
1-9 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Automotive, which gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.
Prerequisites: Vary by section

AUTO 299 Second Year Independent Project in Automotive
1-9 Credits. 0 Lecture Hour. 0 Lab Hour.
A project related to Automotive that is completed by one or more students to meet specific educational goals. Projects must have prior approval and supervision by Automotive faculty. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: Vary by section