Automotive Technology

Technology Building
(435) 652-7723
http://dixie.edu/technology/

To find faculty & staff phone numbers and email addresses, please consult the University Directory (http://www.dixie.edu/directory/directory.php).

Coordinator
Mel Jensen

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Nikki Smith

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Eric Pedersen, Ph.D.

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Program Description
The Automotive Technology program at Dixie State University provides students with the opportunity to increase their automotive mechanics skills for personal enrichment or in order to pursue a career. Career path courses are taught to the National Institute for Automotive Service Excellence (ASE) standards to prepare students for certification tests.

Accreditation
The Automotive Technology program is accredited by the National Automotive Technicians Education Foundation (NATEF), the education arm of the National Institute for Automotive Service Excellence. The National Automotive Technician Education Foundation can be contacted at:

NATEF
101 Blue Seal Drive, Suite 101
Leesburg VA 20175
(703) 669-6650
http://www.natef.org

Course Prefixes
- AUTO

Degrees & Certificates
- Associate of Applied Science in Automotive Mechanics (catalog.dixie.edu/programs/automotive/associate_of_applied_science_in_automotive_mechanics)
- Automotive Mechanics Certificate of Proficiency (catalog.dixie.edu/programs/automotive/automotive_mechanics_certificate)

Courses
AUTO 1100. Automotive Fundamentals. 3.5 Hours.
For students with an interest in the basics of automotive technology in order to understand the function and operation of both components and systems while promoting pride in the trade and the role of the certified automobile technician. Covers design, construction, and operation of all major automotive systems. Combined lab and lecture. No tools are required. SP.

AUTO 1120. Suspension & Steering. 3 Hours.
For students pursuing a certificate or degree in Automotive Mechanics, and open to other interested students. Covers diagnosis, adjustment and repair of various suspension and steering units to prepare students for Automotive Service Excellence (ASE) certification test and for entry-level positions. Minimal tools required. Suggested prerequisite: AUTO 1100, Automotive Fundamentals. Corequisite: AUTO 1125 FA.

AUTO 1125. Suspension & Steering Lab. 3 Hours.
Laboratory portion of AUTO 1120, Suspension & Steering. Covers diagnosis, adjustment and repair of various suspension and steering units to prepare students for Automotive Service Excellence (ASE) certification test and for entry-level positions. Minimal tools required. Requires at least 6 hours in the lab each week. Lab fee required. Corequisite: AUTO 1120. FA.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>AUTO 1130</td>
<td>Brake Systems</td>
<td>3 Hours</td>
<td>Suggested prerequisite: AUTO 1100, Automotive Fundamentals. Corequisite: AUTO 1445. FA.</td>
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<tr>
<td>AUTO 1135</td>
<td>Brake Systems Lab</td>
<td>3 Hours</td>
<td>Laboratory portion of AUTO 1130 Brake Systems. Includes actual diagnosis and repair of all types of automobile brake systems, including hybrids, following National Automotive Technicians Education Foundation (NATEF) task list requirements. Safety and tool usage are stressed. Requires at least 6 hours in the lab each week. Lab fee required. Corequisite: AUTO 1130. SP.</td>
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<tr>
<td>AUTO 1320</td>
<td>Engine Repair</td>
<td>3 Hours</td>
<td>For students pursuing a certificate or degree in Automotive Mechanics, and open to other interested students. Covers principles of construction and operation of modern automotive engines and practical repair applications to prepare students for Automotive Service Excellence (ASE) certification test and for entry-level positions. Minimal tools required. Requires at least 6 hours in the lab each week. Lab fee required. Corequisite: AUTO 1130. SP.</td>
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<tr>
<td>AUTO 1325</td>
<td>Engine Repair Lab</td>
<td>3 Hours</td>
<td>Laboratory portion of AUTO 1320, Engine Repair. Covers principles of construction and operation of modern automotive engines and practical repair applications to prepare students for Automotive Service Excellence (ASE) certification test and for entry-level positions. Requires at least 6 hours in the lab each week. Lab fee required. Corequisite: AUTO 1320. FA.</td>
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<tr>
<td>AUTO 1430</td>
<td>Manual Drive Trains</td>
<td>3 Hours</td>
<td>For students pursuing a certificate or degree in Automotive Mechanics, and open to other interested students. Covers principles of construction and operation of modern automotive engines and practical repair applications to prepare students for Automotive Service Excellence (ASE) certification test and for entry-level positions. Requires at least 6 hours in the lab each week. Lab fee required. Corequisite: AUTO 1320. FA.</td>
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<tr>
<td>AUTO 1440</td>
<td>Automatic Transmissions</td>
<td>3 Hours</td>
<td>For students pursuing a certificate or degree in Automotive Mechanics, and open to other interested students. Covers diagnosis and repair of automatic transmissions and drive trains to prepare students for Automotive Service Excellence (ASE) certification test and for entry-level positions. Requires at least 6 hours in the lab each week. Lab fee required. Corequisite: AUTO 1440. SP.</td>
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<tr>
<td>AUTO 1445</td>
<td>Automatic Transmissions Lab</td>
<td>3 Hours</td>
<td>Laboratory portion of AUTO 1440, Automatic Transmissions. Covers diagnosis and repair of automatic transmissions and drive trains to prepare students for Automotive Service Excellence (ASE) certification test and for entry-level positions. Minimal tools required. Requires at least 6 hours in the lab each week. Lab fee required. Corequisite: AUTO 1440. FA.</td>
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<tr>
<td>AUTO 1500</td>
<td>Basic Automotive Maintenance</td>
<td>2 Hours</td>
<td>Open to all students interested in obtaining knowledge on car maintenance. Designed to give students knowledge and basic skills in automotive maintenance and also provides information about purchasing, liability, and legal rights of the automobile owner. Successful completers will have the knowledge and skills necessary to aid them in personal car maintenance. Combined lab and lecture. FA, SP.</td>
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<tr>
<td>AUTO 2100</td>
<td>Automotive Electrical Systems</td>
<td>3 Hours</td>
<td>For students pursuing a certificate or degree in Automotive Mechanics, and open to other interested students. Covers electrical theory and diagnostic skills for automotive computer systems. Emphasis is placed on basic electric, automotive batteries, the starting system, wiring repair, and electrical diagnostic procedures to prepare students for the Automotive Service Excellence (ASE) certification test and entry-level positions. Suggested prerequisite: AUTO 1100, Automotive Fundamentals. Corequisite: AUTO 2105. FA, SP.</td>
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<tr>
<td>AUTO 2105</td>
<td>Automotive Electrical Systems Lab</td>
<td>3 Hours</td>
<td>Laboratory portion of AUTO 2100 Automotive Electrical Systems. Includes diagnosis and repair of electrical system components (batteries, starting system, charging system, wiring repair, etc.) associated with automobiles, including hybrids, following National Automotive Technicians Education Foundation (NATEF) task list requirements. Safety and tool usage are stressed. Requires at least 6 hours in the lab each week. Lab fee required. Corequisite: AUTO 2100. FA, SP.</td>
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<tr>
<td>AUTO 2220</td>
<td>Engine Performance I</td>
<td>3 Hours</td>
<td>For students pursuing a certificate or degree in Automotive Mechanics, and open to other interested students. Covers identification and location of electrical and vacuum components using schematics and shop manuals, including diagnosis and proper repair of ignitions and computer controls on modern automobiles to prepare students for Automotive Service Excellence (ASE) certification test and for entry-level positions. Minimal tools required. Requires at least 6 hours in the lab each week. Lab fee required. Corequisite: AUTO 2220. FA.</td>
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<td>AUTO 2225</td>
<td>Engine Performance I Lab</td>
<td>3 Hours</td>
<td>Laboratory portion of AUTO 2220, Engine Performance I. Covers identification and location of electrical and vacuum components using schematics and shop manuals, including diagnosis and proper repair of ignitions and computer controls on modern automobiles to prepare students for Automotive Service Excellence (ASE) certification test and for entry-level positions. Minimal tools required. Requires at least 6 hours in the lab each week. Lab fee required. Corequisite: AUTO 2220. FA.</td>
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AUTO 2330. Auto A/C and Heating. 3 Hours.
For students pursuing a certificate or degree in Automotive Mechanics, and open to other interested students. Covers theory, and diagnostic and repair skills for automotive heating and air conditioning systems. Emphasis is placed on basic heat transfer issues, compressors, and associated controls for these systems to prepare students for the Automotive Service Excellence (ASE) certification test and entry-level positions. Corequisite: AUTO 2335. SP.

AUTO 2335. Auto A/C and Heating Lab. 3 Hours.
Laboratory portion of AUTO 2330 Automotive A/C and Heating. Includes diagnosis and repair of heating and air conditioning systems in automobiles, following National Automotive Technicians Education Foundation (NATEF) task list requirements. Safety and tool usage are stressed. Requires at least 6 hours in the lab each week. Lab fee required. Corequisite: AUTO 2330. SP.

AUTO 2530. Engine Performance II & Hybrid Technology. 3 Hours.
For students pursuing a certificate or degree in Automotive Mechanics, and open to other interested students. Covers diagnosis and proper procedures to repair standard and hybrid fuel systems on modern automobiles to prepare students for Automotive Service Excellence (ASE) certification test and for entry-level positions. Corequisite: AUTO 2535. SP.

AUTO 2535. Engine Performance II & Hybrid Technology Lab. 3 Hours.
Laboratory portion of AUTO 2530 Engine Performance II & Hybrid Technology. Includes diagnosis and proper procedures to repair fuel systems on modern automobiles, following National Automotive Technicians Education Foundation (NATEF) task list requirements. Safety and tool usage are stressed. Requires at least 6 hours in the lab each week. Course fee required. Corequisite: AUTO 2530. SP.