

## Automotive Courses

<b>AUT 101 Introduction to Automotive Systems</b>	<b>(3 credits)</b>
<p>Introduces fundamental systems of the automobile: the engine, fuel, exhaust, electric, ignition, lubrication, cooling, transmission, steering, brake and suspension systems. Teaches theory and function of each system. Demonstrates operation. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.</p>	
<b>AUT 166 Automotive Diagnostics I, Electrical Systems</b>	<b>(5 credits)</b>
<p>This course presents basic electrical concepts, diagnostic procedures, and circuit evaluations. Preparation for the ASE A6 Certification Test is also included. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.</p>	
<b>AUT 167 Automotive Diagnostics II, Engine Performance 1</b>	<b>(5 credits)</b>
<p>Presents the application of operation theory and diagnostic procedures on general engine mechanical and electrical systems. Course emphasis is on diagnostic procedures using the latest diagnostic equipment. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.</p>	
<b>AUT 168 Automotive Diagnostics III, Engine Performance 2</b>	<b>(5 credits)</b>
<p>Presents the application of theory and diagnostic procedures on engine performance systems, emissions analysis, and computer controlled systems. Course emphasis is on diagnostic procedures using the latest diagnostic equipment. Includes preparation for ASE Test A8. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.</p>	
<b>AUT 169 Automotive Diagnostics IV, HVAC &amp; Body Electronics</b>	<b>(5 credits)</b>
<p>Presents the application of theory and diagnostic procedures on engine performance systems, emissions analysis, computer controlled systems, body electronics, and climate control systems. Course emphasis is on diagnostic procedures using the latest diagnostic equipment. Includes preparation for Refrigerant Recovery License Test and ASE Test A7. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.</p>	
<b>AUT 193 Vehicle Systems Knowledge I</b>	<b>(3 credits)</b>
<p>Introduces modern automotive shop business practices. Emphasizes customer relations, completion of repair orders, and customer interviewing techniques regarding problems with their cars. Includes business parts purchasing and labor price calculations. Utilizes automotive industry service information resources. Lecture 3 hours</p>	
<b>AUT 220 Automotive Diagnostics V, Steering &amp; Suspension</b>	<b>(5 credits)</b>
<p>Presents the application and operation of diagnostic test equipment to test and inspect steering, suspension, and wheel alignment. Includes preparation for ASE Test A4. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.</p>	

<b>AUT 221 Automotive Diagnostics VI, Brakes &amp; VA State Inspection</b>	<b>(5 credits)</b>
Presents the application and operation of diagnostic test equipment to test braking systems, anti-lock systems, traction control, & vehicle stability systems. Includes preparation for Virginia State Inspection Exam and ASE Test A5. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.	
<b>AUT 247 Automotive Diagnostics VII, Transmissions &amp; Transaxles</b>	<b>(5 credits)</b>
Presents the application and operation of diagnostic test equipment to test and inspect automatic and manual transmissions. Includes preparation for ASE Tests A2 and A3. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.	
<b>AUT 248 Automotive Diagnostics VIII, Engine Repair</b>	<b>(5 credits)</b>
This course presents engine design principles, diagnostic and repair (rebuild) procedures, and related component failure analysis. Includes preparation for ASE Test A1. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.	
<b>AUT 293 Vehicle Systems Knowledge II</b>	<b>(3 credits)</b>
Introduces general automotive systems and their operations. Includes body and suspension systems, engines, electrical system, powertrains, emission controls and accessory systems. Teaches automotive system components identification and functions. Lecture 3 hours.	
<b>AUT 297 Cooperative Education in Automotive</b>	<b>(2cr., 5cr.)</b>
Supervised on-the-job training for pay in approved business, industrial and service firms coordinated by the college's Cooperative Education Office. Is applicable to all occupational-technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours per week.	