



**Automotive Systems Technology  
 Credential: Certificate in  
 Automotive Systems Technology  
 C6016000**

This curriculum prepares individuals for employment as Automotive Service Technicians. It provides an introduction to automotive careers and enhances the student's awareness of having to meet the challenges of this fast and ever-changing field.

Courses include both classroom and lab experiences. Emphasis is placed on theory, servicing and operation of electrical/electronic systems.

Upon completion of this curriculum, students should be prepared for ASE electrical certification and be ready for full-time employment in dealerships and repair shops in the automotive service industry.

**Program Length:** 2 semesters

**Career Pathway Options:** Associate in Applied Science Degree in Automotive Systems Technology (Higher entrance standards required); Diploma in Automotive Systems Technology (Higher entrance standards required); Certificate in Automotive Systems Technology

**Program Sites:** Lee Campus - Evening Program

**Course Requirements for Automotive Systems Technology Certificate**

A. Required Subject Areas (4 SHC)

|         |                    |                  |
|---------|--------------------|------------------|
| AUT 161 | Electrical Systems | C-L-SHC<br>2-6-4 |
|---------|--------------------|------------------|

B. Other Major Hours Required for Graduation (13 SHC)

|         |  |            |
|---------|--|------------|
| AUT 162 | Chassis Electr/Electronics                     | 2-2-3      |
| AUT 163 | Chassis Electr/Electr. Lab                     | 0-2-1      |
|         | or   |            |
| COE 111 | Co-op Work Exp. I                              | 0-10-1     |
| AUT 164 | Automotive Electrical<br>Major Elective Course | 2-2-3<br>6 |

Major elective (6 SHC)

Select 6 SHC from the other available automotive (AUT) courses.

Total Semester Credit Hours Required for Graduation: 17

**Semester Curriculum for Automotive Systems Technology Certificate**

|                     |                                |                         |
|---------------------|--------------------------------|-------------------------|
| 1st Semester (Fall) |                                | C-L-SHC                 |
| AUT 161             | Electrical Systems             | 2-6-4                   |
| AUT 162             | Chassis Electr/Electronics     | 2-2-3                   |
| AUT 163             | Chassis Electr/Electronics Lab | 0-2-1                   |
|                     | or                             |                         |
| COE 111             | Co-op Work Exp. I              | <u>0-10-1</u><br>4-10-8 |

|                       |   |                             |
|-----------------------|---|-----------------------------|
| 2nd Semester (Spring) |   |                             |
| AUT 164               | Automotive Electrical<br>Major Elective | 2-2-3<br><u>6</u><br>5-11-9 |

Total Semester Credit Hours: 17

**AUT 161 Electrical Systems** 2-6-4

This course covers basic electrical theory and wiring diagrams, test equipment, and diagnosis/repair/replacement of batteries, starters, alternators, and basic electrical accessories. Topics include diagnosis and repair of battery, starting, charging, lighting, and basic accessory systems problems. Upon completion, students should be able to diagnose, test, and repair the basic electrical components of an automobile.

**AUT 162 Chassis Elect & Electronics** 2-2-3

This course covers electrical/electronic diagnosis/repair, including wiring diagrams, instrumentation, and electronic/computer-controlled devices and accessories. Topics include interpreting wiring diagrams and diagnosis and repair of chassis electrical and electronic systems. Upon completion, students should be able to read and interpret wiring diagrams and determine/perform needed repairs on chassis electrical and electronic systems.

**AUT 163 Chassis Elec & Elect Lab** 0-2-1

*Corequisites:* AUT 162

This course provides a laboratory setting to enhance chassis electrical and electronic system skills. Emphasis is placed on practical experiences that enhance the topics presented in AUT 162. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in AUT 162.

**AUT 164 Automotive Electronics** 2-2-3

This course covers fundamentals of electrical/electronic circuitry, semi-conductors, and microprocessors. Topics include Ohm's law, circuits, AC/DC current, solid state components, digital applications, and the use of digital multimeters. Upon completion, students should be able to apply Ohm's law to diagnose and repair electrical/electronic circuits using digital multimeters and appropriate service information.

**COE 111 Co-op Work Experience I** 0-10-1

This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.