

**Course Information**

<b>Course Title</b>	Automotive Electronics (Advanced)
<b>Course Prefix, Num. and Title</b>	AUMT 2337
<b>Division</b>	Vocational Science
<b>Department</b>	Automotive Technology
<b>Course Type</b>	WECM Course
<b>Course Catalog Description</b>	Study of electronic principles applied to microcomputers and communication systems. Includes digital fundamentals, and use of electronic test equipment. May be taught manufacturer specific.
<b>Pre-Requisites</b>	Certificate in Automotive Technology and must be TSI Satisfied
<b>Co-Requisites</b>	Enter Co-Requisites Here.

**Semester Credit Hours**

<b>Total Semester Credit Hours (SCH): Lecture Hours:</b>	3:2:4
<b>Lab/Other Hours</b>	
<b>Equated Pay Hours</b>	4
<b>Lab/Other Hours Breakdown: Lab Hours</b>	4
<b>Lab/Other Hours Breakdown: Clinical Hours</b>	Enter Clinical Hours Here.
<b>Lab/Other Hours Breakdown: Practicum Hours</b>	Enter Practicum Hours Here.
<b>Other Hours Breakdown</b>	List Total Lab/Other Hours Here.

**Approval Signatures**

<b>Title</b>	<b>Signature</b>	<b>Date</b>
<b>Prepared by:</b>		
<b>Department Head:</b>		
<b>Division Chair:</b>		
<b>Dean/VPI:</b>		
<b>Approved by CIR:</b>		

## Additional Course Information

**Topical Outline:** Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

Conventional analog Instrumentation, Indicator Lights, and Warning Devices, Conventional Instrument Cluster Diagnosis and Repair  
Electrical Accessories, Electrical Accessories Diagnosis and Repair  
Introduction to the Body Computer, Body Computer System Diagnosis  
Advanced Lighting Circuits and Electronic Instrumentation, Advanced Lighting Systems and Electronic Instrumentation Diagnosis and Repair  
Electronic Chassis Control and Accessory Systems, Diagnosis of Electronic Chassis and Accessory Systems  
Passive Restraint Systems, Servicing Passive Restraint Systems

### Course Learning Outcomes:

**Learning Outcomes – Upon successful completion of this course, students will:**

1. Employ proper safety procedures.
2. Use scan tools, digital storage oscilloscopes, and other electronic test equipment.
3. Apply electronic principles to the diagnosis of microcomputers, analysis of communication circuits, and interpretation of sensor data.

**Methods of Assessment:**

1. Quizzes and assignments Completion of priority 1, 2, and 3 items on the ASE task list, job sheets.
2. Quizzes and assignments Completion of priority 1, 2, and 3 items on the ASE task list, job sheets.
3. Quizzes and assignments Completion of priority 1, 2, and 3 items on the ASE task list, job sheets.

### Required text(s), optional text(s) and/or materials to be supplied by the student:

Advanced Automotive Electricity and Electronics, James D Halderman 2nd Edition or latest edition.  
Complete set of tools in compliance with the tool list.

### Suggested Course Maximum:

24

### List any specific or physical requirements beyond a typical classroom required to teach the course.

Complete auto shop lab with all the tools required by ASE to meet the standards for Automotive Electronics (Advanced)

**Course Requirements/Grading System:** Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

90%to 100% = A

80%to 89% = B

70%to79% = C

60%to 69% = D

Version: 3/20/2019

Below 60% = F

### Curriculum Checklist:

- Administrative General Education Course** (from ACGM, but not in WCJC Core) – No additional documents needed.
- Administrative WCJC Core Course.** Attach the Core Curriculum Review Forms
  - Critical Thinking
  - Communication
  - Empirical & Quantitative Skills
  - Teamwork
  - Social Responsibility
  - Personal Responsibility
- WECM Course** -If needed, revise the Program SCANS Matrix and Competencies Checklist