

**Automotive Technology - Alternative Fuels and Hybrid Technician**

ASSOCIATE OF APPLIED SCIENCE DEGREE (AAS)

REQUIRED CREDITS: 60

DEGREE CODE: AUTAFHTAAS

**DESCRIPTION**

This degree program, one of the largest of its kind in the west, prepares students for lucrative careers as automotive technicians as well as related automotive occupations. Master Accredited by ASE/NATEF, instruction is provided on state-of-the-art equipment in both classrooms and labs. ASE Master Certified technicians provide all instruction, with the focus on understanding automotive systems operation and how to effectively and efficiently diagnose and service these systems. Additionally, emphasis is placed on preparing students to personally pass ASE certification exams. This degree places an emphasis on the current and emerging technology used in hybrid and alternative fueled vehicles.

**STUDENT LEARNING OUTCOMES**

- Demonstrate diagnostic and repair routines as related to the major systems of the automobile.
- Prepare to take the following ASE/NATEF certification exams: ASE A1, ASE A4, ASE A5, ASE A6, and ASE A7.
- Demonstrate knowledge in the use of both printed and electronic repair information and service literature.
- Demonstrate use of both mechanical and PC based computerized diagnostic equipment.
- Demonstrate understanding of diagnostic and repair literature.

**PLEASE NOTE** - The courses listed below may require a prerequisite or corequisite. Read course descriptions before registering for classes. All MATH and ENG courses numbered 01-99 must be completed before reaching 30 total college-level credits. No course under 100-level counts toward degree completion.

**GENERAL EDUCATION REQUIREMENTS (22 CREDITS)**

**MATHEMATICS (3 credits)**

Recommended: MATH 104B Applied Mathematics

**ENGLISH COMPOSITION (3-5 credits)**

Recommended: ENG 107 Technical Communications I

**COMMUNICATIONS (3 credits)**

Recommended: COM 115 Applied Communication

**HUMAN RELATIONS (3 credits)**

Recommended: ALS 101 College Success

**NATURAL SCIENCE (3 credits)**

Recommended: AST 101 General Astronomy

**FINE ARTS/HUMANITIES/ SOCIAL SCIENCE (3 credits)**

Recommended: COM 101 Oral Communication

**U.S. AND NEVADA CONSTITUTIONS (4-6 credits)**

Recommended: PSC 101 Introduction to American Politics

**SPECIAL PROGRAM REQUIREMENTS (38 CREDITS)**

**CORE REQUIREMENTS (34 credits)**

AUTO 105B Automotive Maintenance I	2
AUTO 115B Automotive Electricity and Electronics I	4
AUTO 117B Advanced Automotive Electronics	4
AUTO 136B Engine Repair	5
AUTO 145B Automotive Brakes	4
AUTO 155B Steering and Suspension	4
AUTO 165B Automotive Heating and Air Conditioning	4
AUTO 185B Introduction to Alternative Fueled Vehicles	3
AUTO 285B Hybrid Vehicle Service Techniques	4

**Electives (choose 4 credits)**

AUTO 205B Manual Drive Train and Axles	4
AUTO 216B Automatic Transmissions	5
AUTO 225B Engine Performance I/Fuel and Ignition	4
AUTO 245B Power Train Removal and Replacement	4

**FULL-TIME STUDENT DEGREE PLAN**

*Plan can be modified to fit the needs of part-time students by adding more semesters.*

**FIRST SEMESTER**

	<b>Credits</b>
MATH 104B Applied Mathematics	3
ALS 101 College Success	3
AUTO 105B Automotive Maintenance	2
AUTO 115B Automotive Electricity and Electronics <sup>1</sup>	4
AUTO 117B Advanced Automotive Electronics <sup>2</sup>	4
<b>TOTAL CREDITS</b> .....	<b>16</b>

**SECOND SEMESTER**

	<b>Credits</b>
ENG 107 Technical Communications	3
AUTO 136B Automotive Engine Repair	5
AUTO 145B Automotive Brakes	4
AUTO 155B Automotive Steering and Suspension	4
<b>TOTAL CREDITS</b> .....	<b>16</b>

**THIRD SEMESTER**

	<b>Credits</b>
COM 115 Applied Communication	3
AUTO 165B Automotive Heating and Air Conditioning	4
AUTO 185B Introduction to Alternative Fueled Vehicles	3
AUTO 285B Hybrid Vehicle Service Techniques <sup>3</sup>	4
<b>TOTAL CREDITS</b> .....	<b>14</b>

**FOURTH SEMESTER**

	<b>Credits</b>
AST 101 General Astronomy	3
COM 101 Oral Communication	3
PSC 101 Introduction to American Politics	4
AUTO 205B or 216B or 225B or 245B	4-5
<b>TOTAL CREDITS</b> .....	<b>14-15</b>

**DEGREE PLAN TOTAL CREDITS**..... **60-61**

<sup>1</sup>Prerequisite AUTO 105B. Contact Department of Applied Technologies for permission to complete this course and its prerequisite in the same semester.

<sup>2</sup>Prerequisite AUTO 115B. Contact Department of Applied Technologies for permission to complete this course and its prerequisite in the same semester.

<sup>3</sup>Prerequisite of AUTO 185B. Contact Department of Applied Technologies for permission to complete this course and its prerequisite in the same semester.

- NOTE**
- Course numbers with the “B” suffix may be non-transferable for a NSHE baccalaureate degree.
  - Course numbers with the “H” suffix are designated Honors-level courses and can be used to fulfill equivalent general education requirements. For more information visit [www.csn.edu/honors](http://www.csn.edu/honors).
  - In no case, may one course be used to meet more than one requirement except for the Values and Diversity general education requirement (only AA, AS, and AB degrees) which may be used to fulfill the corresponding general education or emphasis requirement.
  - Students may elect to graduate using the degree requirements in effect at the time of matriculation, or when they declared or changed major or the current catalog. If a program is official after a student has matriculated, the student may choose the degree requirements of the new program. In no case may a student use a catalog which is more than six years old at the time of graduation.

