ASE 100

INTRODUCTION TO AUTOMOTIVE SERVICES

PRESENTED AND APPROVED: DECEMBER 7, 2012

EFFECTIVE: FALL 2013-14
## Course Package

### Prefix & Number

<table>
<thead>
<tr>
<th>Prefix &amp; Number</th>
<th>ASE 100</th>
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</table>

### Course Title:

Introduction to Automotive Services

### Purpose of this submission:

- [x] New
- [ ] Change/Updated
- [ ] Retire

### If this is a change, what is being changed?

(Click all that apply)

- [ ] Update Prefix
- [ ] Title
- [ ] Format Change
- [ ] Credits
- [ ] Prerequisite
- [ ] Competencies
- [ ] Textbook/Reviewed Competencies-no changes needed

### Does this course require additional fees?

- [x] No
- [ ] Yes

If so, please explain.

### Is there a similar course in the course bank?

- [ ] No
- [x] Yes (Please identify)

### Articulation: Is this course or an equivalent offered at other two and four-year universities in Arizona?

- [ ] No
- [x] Yes (Identify the college, subject, prefix, number and title:)

### Is this course identified as a Writing Across the Curriculum course?

- [ ] No
- [ ] Yes

## Course Assessments

### Description of Possible Course Assessments (Essays, multiple choice, etc.)

The course will use various chapter quizzes, exams, and short writing assignments to assess the student’s comprehension of course material.

### Exams standardized for this course?

- [x] Midterm
- [ ] Final
- [ ] Other (Please specify):

Are exams required by the department?

- [ ] No
- [x] Yes

If Yes, please specify:

### Where can faculty members locate or access the required standardized exams for this course? (Contact Person and Location)

Example: NCK – Academic Chair Office

### Student Outcomes: Identify the general education goals for student learning that is a component of this course.

<table>
<thead>
<tr>
<th>Check all that apply:</th>
<th>Method of Assessment</th>
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</thead>
<tbody>
<tr>
<td>1. Communicate effectively.</td>
<td>Students will be required to read and analyze course material and case scenarios of related automotive issues. Students must demonstrate comprehension of material by participating in class discussions.</td>
</tr>
<tr>
<td>a. Read and comprehend at a college level.</td>
<td>☒ Yes</td>
</tr>
<tr>
<td>b. Write effectively in a college setting.</td>
<td>☒ Yes</td>
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<tr>
<td>2. Demonstrate effective quantitative reasoning and problem solving skills.</td>
<td>Students will demonstrate effective reasoning skills through discussion of course material and various writing assignments.</td>
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<tr>
<td>3. Demonstrate effective qualitative reasoning skills.</td>
<td>Students will build on prior week’s lessons by determining the appropriate solutions to given situations or scenarios. Students must demonstrate qualitative reasoning skills through successful completion of weekly quizzes, skills assessments, class discussions, and written exams.</td>
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<td>4. Apply effective methods of inquiry.</td>
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<tr>
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<td>a. Generate research paper by gathering information from varied sources, analyzing data and organizing information into a coherent structure.</td>
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<td>b. Employ the scientific method.</td>
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<td>5. Demonstrate sensitivity to diversity</td>
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<tr>
<td></td>
<td>a. Experience the creative products of humanity.</td>
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<tr>
<td></td>
<td>b. Describe alternate historical, cultural, global perspectives.</td>
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Office of Instruction Use only:

CIP Code:

ONET Code:

Minimum Qualifications:
COURSE INFORMATION

Initiator: Thomas Finneran
Date of proposal to Curriculum Committee: 12/07/12
Effective Semester/Year
Fall 2013
Spring
Summer
Prefix & Number: ASE 100
Full Title: (100 character limit)
Intro to Automotive Services
Short Title: (30 character limit)
Intro to Auto

Catalog Course Description: Introduction to the basic skills indicated by industry standards for certified professionals in the automotive industry. Focus is on developing the life skills necessary to locate and retain gainful employment in the contemporary automotive repair industry. Course also includes an introduction to shop safety, common hand tools, basic shop equipment, measuring systems and tools, basic math theories, and automotive industry terminology.

SUN Course Number:
Credit Hours: 2
Lecture Hours: 2
Lab Hours: 0

Prerequisite(s) Appropriate score on assessment test or successful completion of the TRE 089
Co-requisite(s) None

Intended Course Goals

By the end of the semester, students will be able to:

1. Demonstrate proficiency in applicable safety precautions and adhere to environmental protection policies required by Mohave Community College (MCC), the Environmental Protection Agency (EPA), and the Occupation Standards Agency (OSHA).

2. Develop skills necessary to prepare resumes, appropriately fill out employment applications and properly present themselves for employment interviews.

3. Prepare students for gainful and full-time employment in the Automotive Industry.

4. Prepare students with skills necessary to retain gainful employment in the Automotive Industry.

5. Complete all applicable National Automotive Technicians Education Foundation (NATEF) tasks in course area.
## Course Competencies and Objectives

**By the end of the semester, students will be able to:**

### Competency 1 Demonstrate proficiency in defining automotive career opportunities.
- **Objective 1.1** Provide an overview of automotive employment in the current market.
- **Objective 1.2** List basic servicing issues of contemporary vehicles.
- **Objective 1.3** Identify the characteristics of the automotive job classification and related career opportunities.
- **Objective 1.4** Outline the training requirements for an automotive service career.
- **Objective 1.5** List the requirements to complete the ASE certification.

### Competency 2 Demonstrate proficiency in defining workplace skills.
- **Objective 2.1** Prepare a resume.
- **Objective 2.2** Complete an application process.
- **Objective 2.3** Summarize basic interviewing techniques.
- **Objective 2.4** Explain the importance of personal/professional appearance.
- **Objective 2.5** Explain the role of communication skills in the service industry.
- **Objective 2.6** Explain the importance of regular attendance and punctuality in both the college environment and the workplace.
- **Objective 2.7** Identify the characteristics of a productive employee.
- **Objective 2.8** Explain the difference between hourly and flat rate pay.
- **Objective 2.9** Identify the skills required for basic money management.
- **Objective 2.10** List the benefits of loyalty, responsibility, and professionalism in employees.
- **Objective 2.11** Summarize the principle of customer service.

### Competency 3 Demonstrate proficiency in common shop safety practices.
- **Objective 3.1** Identify personal safety concerns.
- **Objective 3.2** Identify general tool and equipment safety concerns.
- **Objective 3.3** Identify general work area safety concerns.
- **Objective 3.4** Outline hazard communications.

### Competency 4 Define automotive systems and basic operational characteristics.
- **Objective 4.1** Identify the characteristics and terminology used for basic automotive functions.
- **Objective 4.2** Identify the characteristics and terminology used for automotive body construction.
- **Objective 4.3** Identify the characteristics and terminology used for automotive engines.
- **Objective 4.4** Identify the characteristics and terminology used for automotive electrical systems.
- **Objective 4.5** Identify the characteristics and terminology used for automotive powertrains.
- **Objective 4.6** Identify the characteristics and terminology used for automotive chassis systems.
- **Objective 4.7** Identify the characteristics and terminology used for automotive vehicle identification.
- **Objective 4.8** Explain the value of the Society of Automotive Engineers (SAE) J1930 terminology.
- **Objective 4.9** Explain the principles of suspension in automotive systems.
- **Objective 4.10** Explain the principles of steering in automotive systems.
- **Objective 4.11** Explain the principles of powertrain lubrication in automotive systems.

### Competency 5 Identify basic hand tools and shop equipment and their proper use for contemporary vehicle systems diagnosis and repair.
- **Objective 5.1** Identify the names and purposes of standard measuring systems and tools.
- **Objective 5.2** Identify the names and purposes of standard fasteners.
- **Objective 5.3** Identify the names and purposes of standard hand tools.
- **Objective 5.4** Identify the names and purposes of standard shop equipment.
- **Objective 5.5** Identify the names and purposes of standard power tools.
- **Objective 5.6** Identify the names and purposes of standard jacks and lifts.

### Competency 6 Identify basic diagnostic equipment and special tools and their proper use for contemporary vehicle systems diagnosis and repair.
- **Objective 6.1** Identify the names and purposes of standard engine repair tools.
- **Objective 6.2** Identify the names and purposes of standard electrical/electronic system tools.
- **Objective 6.3** Identify the names and purposes of standard engine performance tools.
- **Objective 6.4** Identify the names and purposes of standard transmission and driveline tools.
- **Objective 6.5** Identify the names and purposes of standard suspension and steering tools.
- **Objective 6.6** Identify the names and purposes of standard brake system tools.
**Objective 6.7** Identify the names and purposes of standard Heating, Ventilation, and Air Conditioning (HVAC) tools.

**Competency 7** Identify the sources of service information and their required use for contemporary vehicle systems diagnosis and repair.
- Objective 7.1 Locate and utilize electronic manufacturer’s service manuals.
- Objective 7.2 Locate and utilize aftermarket repair manuals.
- Objective 7.3 Summarize the utilization of standard pre-delivery inspection procedures.

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- Objective 7.2 Locate and utilize aftermarket repair manuals.
- Objective 7.3 Summarize the utilization of standard pre-delivery inspection procedures.

**Competency 8** Explain the basic theories and math applicable to contemporary vehicle systems diagnosis and repair.
- Objective 8.1 Define matter, energy, volume, force, time, motion, and work as they relate to the automotive service industry.
- Objective 8.2 Explain the use of waves and oscillations as they relate to the automotive service industry.
- Objective 8.3 Explain the theories of light, liquid, gas, and heat as they relate to the automotive service industry.
- Objective 8.9 Explain the importance of identifying chemical properties in materials used in the automotive service industry.
- Objective 8.13 Explain the theories of electricity and electromagnetism as they relate to the automotive service industry.
- Objective 8.14 Explain the basic characteristics of engine math.

### Current Course Textbook, Materials and Equipment

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### PROPOSED New Course Textbook, Materials and Equipment

**Effective Semester/Year**
- Fall
- Spring
- Summer

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