



El Camino College Automotive Technology

Course Syllabus

ATech 1 **Introduction to Automotive Service** **Fall 2015** Section #: 7256 Credits: 2.00

Instructor Name: **Mr. Anderson**
Email: **mianderson@elcamino.edu**

Class meeting time: **Tues. 1:30pm-5:50pm**
Office phone: **(310) 660-3593 ext. 3303**

Course Description:

This course covers the basic principles and terms of automotive systems and service. Automotive systems and components covered include gasoline engines, tires, batteries, charging systems, ignition, fuel, cooling, lighting, brakes and suspension theory and operation. Automotive service procedures and tools used with these systems are reviewed as are the essentials of shop safety and accident prevention procedures necessary when servicing these systems.

Course Length: 16 weeks

Student Learning Outcomes:

- 1) Students will be able to understand and apply safety rules and principles which pertain to the Automotive Technology requirements of working safely in the auto shop, proper use of hand tools and air tools. Safely working with other students in the shop and working safely with equipment pertaining to the particular classroom setting.
- 2) The student will be able to perform a visual inspection of under hood vehicle components, check fluid levels and condition of fluids to industry standards. Then analyze the data from a Vehicle Under-Hood Inspection Lab Sheet to determine any recommended repairs and/or service required to maintain the vehicle to manufacturer's specifications.
- 3) The student will be able to perform a visual inspection chassis, brake system, steering and suspension system, check fluid levels and condition of fluids to industry standards. Then analyze the data from an Under Vehicle Inspection Lab Sheet to determine any recommended repairs and/or service required to maintain the vehicle to manufacturer's specifications.

Required Textbooks:

Introduction to Automotive Service, 1st Edition, James D. Halderman/Darrell Deeter, Pearson Education, Inc., ISBN-10: 0-13-254008-8, ISBN-13: 978-0-13-254008-7

Other Required Materials:

- 3 ring binder notebook and paper
- Pencil (recommended)
- Safety glasses
- Shop safe clothing

Student Conduct: NO PARKING IN THE SHOP UNLESS APPROVED BY YOUR INSTRUCTOR.

- Turn off all cell phones, I-pods, MP3 players, radios, etc. during class time.
- No smoking inside of the building
- It is the students responsibility to keep the shop area clean.

Course Content: Weekly Course Topics

Week 1:

- Chapter 6 *Shop Safety*
- Chapter 7 *Environmental & Hazardous Materials*

Week 2:

- Chapter 9 *Hand Tools*
- Chapter 10 *Power Tools & Shop Equipment*

Week 3:

- Chapter 17 *Under-hood Inspection*
- Chapter 12 *Service Information*

Week 4:

- Chapter 18 *Vehicle Lifting and Hoisting*
- Chapter 35 *Tires and Wheels*

Week 5:

- Chapter 19 *Lube, Oil and Filter Service*

Week 6:

- Chapter 36 *Brakes & Antilock Braking Systems*
- Chapter 37 *Suspension & Steering Systems*

Week 7:

- Chapter 14 *Gasoline Engine Operation*

Week 8:

- Chapter 31 *Fuel-Injection Systems*

Week 9:

- Chapter 16 *Engine Lubrication and Cooling Systems*

Week 10:

- Chapter 20 *Electrical Fundamentals*
- Chapter 21 *Electrical Circuits*

Week 11:

- Chapter 21 *Electrical Circuits*
- Chapter 23 *Starting & Charging Systems*

Week 12:

- Chapter 23 *Starting & Charging Systems*

Week 13:

- Chapter 30: *Ignition Systems*

Week 14:

- Chapter 13: *Vehicle I.D. and Emissions Ratings*

Week 15:

- Chapter 40: *Used Vehicle & Pre-Delivery Inspection*

Week 16: *Course Review*

Instructional Methods:

The course will be delivered through a variety of methodologies, including the following:

- ♦ Lectures combined with presentations using computer software (PowerPoint), the Internet, and videos/DVDs.
- ♦ Interactive discussions in which students will be expected to actively participate.
- ♦ Written assignments/homework
- ♦ Lab/shop assignments, hands on work on vehicles

Grading Criteria:

The following grading scale will be used in calculating the final grade:

Shop Participation, Homework	25%
Attendance	25%
Quizzes and Exams	25%
<u>Final Examination</u>	<u>25%</u>
	100%

Grading Scale:

90 – 100%	A
80 – 89%	B
70 – 79%	C
65 – 70%	D
Below 65%	F

Disability: El Camino College adheres to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations for students with temporary and permanent disabilities. If you have a disability that may adversely affect your work in this class, I encourage you to register with the Special Resource Center (SRC) and talk to me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: For more information about the Special Resource Center, please call 6603295 or visit (SRC) Room F-10.