



Basic Course Information

Semester:	Spring 2023	Instructor Name:	Andres Estrada
Course Title & #:	Automotive Maintenance & Repair AUT 085	Email:	andres.estrada@imperial.edu
CRN #:	20912	Webpage (optional):	
Classroom:	1102	Office #:	1102
Class Dates:	February 13th-June 9th	Office Hours:	M/W 1pm-2pm T/Th 9am-10am
Class Days:	Tuesday & Thursday	Office Phone #:	
Class Times:	10:15am-12:45am	Emergency Contact:	Tisha Nelson: 760-355-6361
Units:	3.0	Class Format:	Face to Face

Course Description

This course is designed for students with little or no previous automotive maintenance training. This course consists of automotive safety, demonstrations of emergency situations, such as, changing a flat tire, replacing burned out lamps, and performing general vehicle maintenance and repairs. In addition, the student will learn the correct and safe way to use basic hand tools. (C-ID: AUTO 110 X) (Nontransferable, AA/AS degree only)

Course Prerequisite(s) and/or Corequisite(s)

None

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Explain the interaction of automotive systems.
2. Describe the purpose of the fundamental automotive system.
3. Describe the type of skills needed to be an auto technician.

Course Objectives

Upon satisfactory completion of the course, students will be able to:

1. Demonstrate safe job practices.
2. Demonstrate emergency situations and repairs.
3. Demonstrate how to inspect and replace all types of lamps.
4. Demonstrate how to inspect, replace and repair windshield accessories.
5. Demonstrate how to use jumper cables with precaution.
6. Demonstrate how to perform vehicle maintenance and repairs.
7. Demonstrate how to use basic hand tools.

Textbooks & Other Resources or Links

Goodheart Wilcox – Modern Automotive Technology 10th Edition by James E. Duffy

ISBN 978-1-64564-688-4

Access to computer, Internet, and word type applications.

Pen and pencils

Standard writing paper and notebook.

Lab days will require: Safety glasses, work footwear (no open toe shoes, slip resistant), proper shirts and pants.

Course Requirements and Instructional Methods

This course will consist of a variety of instructional methods and assignments including, but not limited to, lectures, class discussions, group activities, a research paper, interviews, and hands-on shop experiences.

Course Grading Based on Course Objectives

Grading System:

A – 405-450 of points = Excellent

B – 360-404 of points = Good

C – 315-359 of points = Acceptable

D – 270-314 of points = Below Average

F – 269 points and below = Failing

Activities	Points
Homework, Classwork Activities, Lab	290
Mid-Term Exam	80
Final Exam	80
Total Points	450

***There are no make-up exams unless arrangements with the instructor are made prior to exam.

Course Policies

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor.
- Food and Drink: Food and drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed by the instructor.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the General Catalog.



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- Children in the classroom: Due to college rules and state laws, only students enrolled in the class may attend; children are not allowed.

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the important of acknowledging and safeguarding intellectual property. There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

Plagiarism is taking and presenting as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to cite a source correctly, you must ask for help.

Cheating is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question. Anyone caught cheating or plagiarizing will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the [General Catalog](#) for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to, the following:

- plagiarism
- copying or attempting to copy from others during an examination or on an assignment
- communicating test information with another person during an examination
- allowing others to do an assignment or portion of an assignment
- using a commercial term paper service.

Attendance: A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See [General Catalog](#) for details.

Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.

Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as excused absences.



Other Course Information

Shop/Lab Area Safety

- Safety test must be passed to work in the shop and complete required lab exercise.
- Safety glasses are required to be worn at all times while in the shop area, safety glasses are the student's responsibility (students not wearing safety glasses will be asked to leave lab for that day, no exceptions).
- Clean up your area and any other loose debris, trash, or spills.
- Wear all required safety protection and comply with posted signs.
- No shorts or open toe footwear, always be prepared for lab exercises.
- Comply with tool check out policy and clean tools before returning.
- Damaged or missing tools must be reported immediately. Tools are the students' responsibility.
- Do not perform any work on any vehicle outside the assigned task without permission from your instructor.
- Long hair must be kept in a ponytail or tucked away for safety.
- Jewelry such as rings and necklaces must be put away or tucked in for safety.
- Lab work will cease 20 minutes prior to end of class to allow time for cleaning areas and returning tools.

Projects

- All projects must be approved by instructor and require a written work order.
- All projects must be removed from campus prior to finals.
- Projects are taken with students at end of class unless approved by instructor.

In addition to standard course curriculum, portions of this course will prepare you for ASE certifications.

IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> or click the heart icon in Canvas.

Anticipated Class Schedule/Calendar

Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
Week 1	Syllabus & Introduction Chapter 5: Auto Shop Safety Safety Test Chapter 3: Basic Hand Tools	Pages 55-65 Pages 29-52
Week 2	Chapter 4: Power Tools & Equipment Chapter 6: Automotive Measurement Lab Worksheets	Chapter 5/3 homework due Pages 42-52 Pages 67-73
Week 3	Chapter 7: Service Information & Work Orders Lab Worksheets	Chapter 4/6 homework Due Pages 78-84



Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
Week 4	Chapter 28: 12-Volt & HV Battery Technology Chapter 29: 12-Volt & HV Battery Service Lab Worksheets	Chapter 7 homework due Pages 355-382
Week 5	Chapter 9: Vehicle Maintenance, Fluid Service, & Recycling Chapter 36: Lights, Instrumentation, Wipers, & Horns Lab Worksheets	Chapter 28/29 homework due Pages 100-115 Pages 460-482
Week 6	Chapter 73: Tire, Wheel, & Wheel Bearing Fundamentals Lab Worksheets	Chapter 9/36 homework due Pages 1103-1117
Week 7	Chapter 80: Brake System Technology Lab Worksheets	Chapter 73 homework due Pages 1139-1157
Week 8	Chapter 75: Suspension System Technology Mid-Term Exam	Chapter 80 homework due
Week 9	Chapter 76: Steering System Technology Lab Worksheets	Chapter 75 homework due
Week 10	Chapter 49: Lubrication System Fundamentals Chapter 50: Lubrication System Diagnosis, Testing, and Repair Lab Worksheets	Chapter 76 homework due Pages 678-705
Week 11	Chapter 47: Cooling System Technology Chapter 48: Cooling System Testing, Maintenance, and Repair Lab Worksheets	Chapter 49/50 homework due Pages 639-676
Week 12	Chapter 39: Automotive Fuels & Combustion Efficiency Chapter 40: Fuel Tanks, Pumps, Lines, & Filters Lab Worksheets	Chapter 47/48 homework due Pages 517-547
Week 13	Chapter 41: Gasoline Injection Fundamentals Chapter 42: Gasoline Injection Diagnosis & Repair Lab Worksheets	Chapter 39/40 homework due Pages 549-588
Week 14	Chapter 63: Manual Transmission Technology Chapter 65: Automatic Transmission Technology Lab Worksheets	Chapter 41/42 homework due Pages 956-972,984-1003
Week 15	Chapter 69: Differential and Rear Drive Axle Technology Chapter 71: Transaxle and CV Axle Technology Lab Worksheets	Chapter 63/65 homework due Pages 1040-1052,1072-1086
Week 16	Final Exam	Chapter 69/71 homework due

*****Subject to change without prior notice*****