

Basic Course Information

Semester	Fall 2014	Instructor's Name	David R. Martinez
Course Title & #	AUT 125	Instructor's Email	david.martinez@imperial.edu
CRN #	10822	Webpage (optional)	
Room	1102-1103	Office	809
Class Dates	Aug 21, 2014 - Dec 11, 2011	Office Hours	None
Class Days / Times	Thursday 6:30-9:40 pm Saturday 8:30-11:40 am	Office Phone #	760 355-6361
Units	4 Units	Who students should contact if emergency or other absence	Instructor 760 404-9533

Course Description

This course covers the principles of instruction in disassembly, inspection, installation and adjustments of the modern brake system. Laboratory activities stress brake system diagnosis, repair, machining, and overhaul procedures and proper use of tools and equipment utilized in the industry. Upon successful completion of this course, students are prepared to take the automotive service excellence (ASE) certification examination in brakes.

Student Learning Outcomes

IVC as an institution has adopted five student-learning outcomes (SLO'S). They are interconnected with each other. They will be inherent throughout this course.

1. Communication
2. Skills
3. Critical Thinking Skills
4. Information Literacy
5. Global Awareness

Course Objectives

Upon successful completion of this course, students will be able to:

- A. Comply with all safety shop procedures associated with stands, air tools, hydraulic jacks, and car lifts.
- B. Have a thorough understanding of the brake system and its components
- C. Describe the power brake systems and anti-lock operation
- D. Describe the proper steps and procedures of disc brake and drum brake overhaul

Textbooks & Other Resources or Links

Modern Automotive Technology Book and Workbook

Author: James E. Duffy

Instructional Methods

Lectures, textbook/workbook, assignments, worksheets, video guide, internet information, live demonstrations, quizzes, mid-term and final tests.

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement.

Course Grading Based on Course Objectives

There will be a Mid-term and a Final exam. Each will be worth 25% of your grade. Quizzes will make up 25% of your grade. The last 25% of your grade will be based on completion of projects assigned as part of the lab section of the class.

Percentage	Scores	Letter Grade
25% Completed Assignments	90-100%	A
25% Quizzes	80-89%	B
25% Mismatch Exam	70-79%	C
25% Final Exam	60-69%	D
	Less than 60%	F

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.
- Four tardies = one absence, four absences and you will be dropped from the class or given an incomplete (IC) for the course.

Classroom Etiquette

- 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 are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed.
 - 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.
 - Children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.
- Shop rules and Safety:
- - **No music allowed in the auto shop**
 - - **No parking in front of gate**
 - - **No work should be done without instructor's permission**
 - - **No parking inside the shop during lecture time**
 - - **Each student should clean the work area**
 - - **Break must be 10 min per class hr.**
 - - **Students may not leave early without instructor's permission**
 - - **No helpers or visitors during lab activities**
 - - **Safety glasses are required**

Academic Honesty

- Plagiarism is to take and present 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 correctly 'cite a source', 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, or assisting others in using materials, which are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or 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 School Catalog for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment ;(c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment, (e) use of a commercial term paper service

Additional Help – Discretionary Section and Language

- Blackboard support center: <http://bbcrm.edusupportcenter.com/ics/support/default.asp?deptID=8543>
- Learning Labs: There are several 'labs' on campus to assist you through the use of computers, tutors, or a combination. Please consult your college map for the Math Lab, Reading & Writing Lab, and Learning Services (library). Please speak to the instructor about labs unique to your specific program
- Library Services: There is more to our library than just books. You have access to tutors in the learning center, study rooms for small groups, and online access to a wealth of resources.

Disabled Student Programs and Services (DSPS)

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible. If you feel you need to be evaluated for educational accommodations, the DSP&S office is located in Building 2100, telephone 760-355-6313.

Student Counseling and Health Services

Students have counseling and health services available, provided by the pre-paid Student Health Fee. We now also have a fulltime mental health counselor. For information see <http://www.imperial.edu/students/student-health-center/>. The IVC Student Health Center is located in the Health Science building in Room 2109, telephone 760-355-6310.

Student Rights and Responsibilities

Students have the right to experience a positive learning environment and due process. For further information regarding student rights and responsibilities please refer to the IVC General Catalog available online at http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762

Information Literacy

Imperial Valley College is dedicated to help students skillfully discover, evaluate, and use information from all sources. Students can access tutorials at <http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/>

Anticipated Class Schedule / Calendar

Week	Activity, Assignment, and/or Topic	Class Activities	Homework/ Exams
Week 1 Part II	Orientation: -Safety -Types of Brakes systems -Safety and Brakes fundamentals -Principles of braking and Drum/disc brakes -Parking, hydraulic, Power Brake boosters -Antilock braking system, -Brake system and repair Chapter 5 Automotive Safety -Describe the typical Layout sections of an auto shop -List the types of Accidents that occur in an auto shop	Show Safety Videos Pages 27-30 Study Guide	Video Safety Test Class Book Review Questions Pages 68-69
Week 2	Chapter 3 Automotive Tools -Identify common Automotive hand tools -Select the right tool for a given job (homework) -Use hand tools safely	Study Guide Worksheets And review with the class Pages 19-22	Class Book Review Questions Pages 45-46
Week 3	Chapter 71 Brake Systems -Explain the hydraulic Mechanical principles of Brake systems -Identify the major parts of an automotive brake system -Discuss drum and disc brakes -Discuss the operation of parking brakes	Study Guide Worksheets Review with the class	Review Questions Quiz #3 Pages 1391-1392
Week 4	Brake Services		
Week 5	Chapter 6 -Micrometers Telescoping gauges and small hole gauges Vernier calipers Feeler gauges	Study guide worksheets And review Pages 31- 34	Quiz #4 Class book Review questions Page 83
Week 6	Chapter 9 -Fastners, threaded fastners -Kev and nins snan rings	Study guide Worksheets	Class book review Questions

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	<ul style="list-style-type: none"> rivets -Adhesives, sealants, seals -Gaskets 	Review With the class Pages 41-42	Page 125
Week 7 & 8	Chapter 72 <ul style="list-style-type: none"> -Diagnosis of common brake problems -Inspection and maintenance of brake system -Describe basic procedures for servicing a master cylinder and a brake booster 	Study guide worksheets and review with the class Pages 365-372	Quiz #5 Review Questions Page 1418
Week 9	Mid-Term Exam		
Week 10 & 11	Chapter 73 <ul style="list-style-type: none"> -Identification of the major parts of the brake system -Describe the operation of anti-lock brake systems -Diagnosis anti-lock Brake systems -Repairing anti-lock brake systems 	Study guide worksheets And review with the class Pages 373-376	Quiz # 6 Review Questions Page 1442
Week 12	Chapter 65 <ul style="list-style-type: none"> -Tire types and basic -Thread patterns -Tire markings -Tire service -Improvement and advance 	Study guide worksheets and review with the class Pages 331-336	Quiz # 7 Class book Review Questions Pages 1254-1255
Week 13	Chapter 17 <ul style="list-style-type: none"> -Computer control system -Components of a computer -Sensors -Electronic control -Module operation -Actuators 	Study guide Worksheets Pages 77-82	Quiz # 8 Class book Review Questions Page 259
Week 14	Chapter 18 <ul style="list-style-type: none"> -On-board diagnostics -Diagnostic troubles codes -Activating self-diagnostic system 	Study guide Pages 83-88	Quiz # 9 Homework Review Page 279
Week 15	Preparation for Automotive Service Excellence (ASE) Brake Exam		
Week 16	Review and preparation for Final Exam		