

CUYAMACA COLLEGE
AUTOMOTIVE TECHNOLOGY
COURSE SYLLABUS
INTRODUCTION TO AUTOMOTIVE TECHNOLOGY – AUTO 099
Fall 2009

INSTRUCTOR: Jim Custeau
OFFICE: K-123 OFFICE HOURS: M,W 10-11:30am; T,TH 1-2pm
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Text Book: Auto Fundamentals; Stokel; Copyright 2005; Goodheart-Wilcox Co. Inc. ISBN: 1-59070-325-1

COURSE SECTION: 0994

COURSE DESCRIPTION: This course is designed to present basic information about automotive systems. It will be taught with the consumer in mind, but will also serve as an introductory course for those interested in the Automotive Technology major.

PURPOSE: This course will provide the student with an overview of the physical, electrical and mechanical functions of the automobile. The theory of operation of many of the basic components of automobiles will be emphasized. This course attempts to recognize the entry-level of the student population ranges from no theoretical or practical automotive mechanical experience to extensive practical and some theoretical experience.

This course also recognizes that the expectations of the student population varies widely, including those seeking a consumer point of view and those who plan a career as a professional automotive technician.

The course will be informative and enlightening for the consumer oriented student and will set the stage for students in the automotive technology major for the remainder of their course work.

This course does not provide “hands-on” automotive experience. The basic “hands-on” course is the accompanying, and recommended lab: Auto100. Both the Auto 099 and Auto 100 courses are highly recommended for those students who wish to maximize their understanding of basic automotive systems.

**Course Objectives (Expected Student Learning Outcomes)
Students will be able to:**

- 1) Demonstrate understanding of standardized safety and hazardous waste handling practices
- 2) Develop and understanding of how the major automotive systems work and how they interrelate to each other
- 3) Demonstrate knowledge of the various classification types of automotive repair businesses.

Cell phones and beepers should be turned off in the classroom!

Successful completion of this course will consist of minimum achievement level in a combination the following areas;

1. Read and understand all reading assignments (see course calendar) in the required text
2. Be present for all quizzes – they will be given either at the beginning or end of each class and may be assigned as a take home quiz – there is no make-up for missed quizzes
3. Mid-term exam of approximately 50 questions
4. Final exam of approximately 100 questions
5. Students must purchase and build a car model. The model must be 1/25 scale or larger. It must have an engine and drive-train and should be painted. (no snap together or already assembled cars allowed)

Grading Policy:

A = 90-100%
B = 80-90%
C = 70-80%
D = 60-70%
F = below 60%

Grade Break down by assignment area:

Quizzes	20 %
Midterm	30 %
Final Exam	30 %
Car Model	20 %

Extra credit: See Instructor by the end of the 8th week of class if interested in earning extra credit.

Attendance

It has been my experience that students are most successful when they attend all class sessions and are not late to class. As a courtesy, students should call if they must miss a class..

Students who miss more than four class sessions may be dropped from the course.

College Policies & Student Conduct:

This course adheres to the policies outlined in the Cuyamaca College Catalog. For further information see "Academic Policies and Student Code of Conduct" sections in the college catalog.

Students who violate student code of conduct as outlined in the college catalog will be penalized.

Academic Accommodations for Students with Disabilities

Academic accommodations are available for students with disabilities. Please identify yourself to me and/or to Disabled Students Programs and Services staff so that the appropriate accommodations can be ensured. If you suspect that you have a learning disability or require services for any other type of disability, contact the Disabled Students Programs and Services program in the Student Services One-Stop Center or call 619.660.4386

You must be officially enrolled in this course in order to attend. All students must be enrolled by September 4, 2009.

**Cuyamaca College
Automotive Technology
Auto – 099
Model Car
Assignment Guidelines**

The goal of this assignment is for students to become familiar with the components and construction of the automobile. You must select a model that has a complete driveline (engine, transmission, suspension, etc.). You are required to paint and assemble the model. **Pre-built/assembled models (die-cast) do not meet the requirement for this assignment and will receive no credit.**

It is recommended that student purchase a 1/24 or 1/25 scale plastic model kit. The models are usually rated in different skill levels from 1 – 3. **Level 1 models are “snap-together” designs and do not qualify for this assignment. Also, models with pre-painted bodies do not satisfy the requirements of this assignment.**

I recommend that you purchase a Monogram or AMT brand model kit – skill level 2 or 3. If you wish you may buy a more advanced model, such as a Tamiya. However, these are best left to the more experienced model builders.

Here is a resource list of retailers who sell models: (I haven't updated this list in the last semester, call before going to see if they are still in business)

Andy's Hobby Headquarters 1571 N. Magnolia Ave. El Cajon, CA 92020 619.562.1790 (best kit selection)	Discount Hobby Warehouse 7644 Clairemont Mesa Blvd. San Diego, CA 858.560.9633 Hours: 10-7, M-F; 10-5, weekends
	Hobby Shack 473 Broadway El Cajon, CA 619.444.6135
Steve's Hobbies 6265 Lake Leven Dr. San Diego, CA 619.4615421	Various Toys R Us and Michael's locations. Search on-line for internet retailers.

WEEK	DATE	LECTURE	*READING ASSIGNMENT
1	8-25 8-27	Course Introduction/Safety Procedures Automotive Tools	Chap. 4 Chap. 5
2	9-1 9-3	4-stroke cycle principles; engine construction Engine classification; engine tests & measurement	Chap. 1,2 Chap. 3,6
	9-4	Last Day to add semester length classes	
3	9-8 9-10	Cooling system Lubrication system	Chap. 11 Chap. 12
4	9-15 9-17	Electrical fundamentals Ignition system	Chap. 7 Chap. 8
5	9-22 9-24	Fuel system: Supply and Carburetion Fuel system: fuel injection	Chap. 10 Chap. 9
6	9-29 10-1	Exhaust system, turbo and supercharging Battery design Fundamentals	Chap. 13; handouts Chap. 16
7	10-6 10-8	Starting and Charging system Computer systems	Chap. 16 Chap. 15
8	10-13 10-15 10-16	Review for Mid-term Mid-term exam Last Day to apply for fall '08 Degrees/certificates	Review reading assign. & notes
9	10-20 10-22	Review Mid-term exam Emissions Systems	Chap. 14
10	10-27 10-29	Manual Transmissions and Clutches 4 wheel Drive and Automatic Transmissions	Chap. 18,19 Chap. 20,21
11	11-3 11-5	Axles and Drives Brakes	Chap. 22 Chap. 23
12	11-10 11-12 11-12	Suspension Systems Steering systems Last Day to Drop Semester Length Class	Chap. 24 Chap. 25
13	11-17 11-19	Wheels and Tires Wheel Alignment	Chap. 26 Chap. 27
14	11-24 11-26	Air Conditioning and Heating/ Career Opportunities Holiday - Thanksgiving	Chap. 28, 29, 30
15	12-1 12-3	Hybrid Systems, Fuel Cells and other new technology When will Oil be gone – then what?	Handouts
16	12-8 12-10	Car Model Car Show and Judging Review for Final Exam	Bring your completed Model for show Review all reading assign. & notes
17	12-15	Final Exam (2-4pm)	

*** Read the chapter prior to class on assigned day; example: for Thursday, 8-27 you should read chapter 5 prior to class.**