Cuyamaca College
Introduction to Automotive Technology Spring 2017 099 section 1764

Brad McCombs
brad.mccombs@gcccd.edu
(619) 660-4267

Office Hours: Room K-118 Mondays and Wednesdays 9:00 a.m. to Noon, Tuesday, Thursday, and Friday by appointment. I am also available for evening or morning tutoring hours using CCC Confer Zoom from 8:00 p.m. till 10:00 p.m. Monday through Thursday. This allows us to conference from any computer, phone, or smart device. Students must log in and create a student account and then schedule your tutoring session with me at least 48 hours in advance. I will send you a confirmation number and phone number you can use to call in with your phone and log in with your computer.

CCC Confer Zoom

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 the expectations student varies, 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. We will use the NATEF ASE composite vehicle, which is the national standard, for our learning exercises. We want students to gain knowledge about automotive repair certifications required by industry. We want to teach you the content you need to be able to describe.

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. Students should study Automotive Electrical 122 before taking Automotive 120 Engine Performance. Every part of the modern car has some electrical or electronic aspect.

Course Objectives; Expected Student Learning Outcomes:

After completing this course students will be able to:

1) Demonstrate understanding of standardized safety and hazardous waste handling practices.
2) Develop an 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.

Course Materials Required:

TEXT BOOK: Automotive Technology Principles Diagnosis and Service Fifth Addition. Author: James D. Halderman ISBN-13: 978-0-13-399461-2 Students can purchase the book from the Bookstore, or purchase the online version of the book. Quizzes, lectures, and assignments will reference the textbook. There will be chapter reading assignments to accompany the content included in each learning module.

Student Project 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. Students may buy a more advanced model, such as a Tamiya. However, these are best left to the more experienced model builders.

Other Approved Projects:

Here some other suggestions for projects:

Make your own project out of clay.

Make a salt solar powered car.

Make a radio controlled flying car.

Here is a resource list of retailers who sell models:

Toys R US	Michaels Carmel Mountain Plaza 12060 Carmel Mountain Rd (858) 675-1170 Open until 9:00 PM
Hobby Central 9705 Carroll Centre Rd #103 (858) 693-0373 Open until 7:00 PM	Discount Hobby Warehouse 7644 Clairemont Mesa Blvd (858) 560-9633 Open until 7:00 PM
Hobby People Broadway Plaza Shopping Center 469 Broadway (619) 444-6135 Open until 7:00 PM	Reed's Hobby Shop 8039 La Mesa Blvd (619) 464-1672 Open until 6:00 PM
Krazy Kevins Hobbies 1223 Third Ave Suite D (619) 422-2724 Open until 6:00 PM	Hobby Lobby 91942, 8810 Grossmont Blvd (619) 464-1795 Open until 8:00 PM
El Cajon Hobbies 1571 Magnolia Ave (619) 449-9990 Open until 7:00 PM	EZDrone 6910 Miramar Road #105 (858) 751-4644 Open until 8:00 PM
Search the Internet	**Search Swap Meets**

Students must present their un-built model kit to me before building the model for full credit. This can be done by taking a picture of the model kit and posting in your “Lab Project Discussion Board Assignment”.

Alternative Projects

Students may also propose an alternative project rather than building a plastic model. Students may propose: Building a robotic car using computer controlled solenoids, paint, sculpture, drawing, woodwork, metal, or design clay, drones, or alternative energies, only if the student receives pre approval of the project. Students may also write an essay related to our desire to limit pollution, and describing ways the modern car does or does not limit pollution. **Please submit your project plan by the approval date posted in Canvas.**

Students will present their projects during the dates posted to the entire class using the Discussion Board. Students are required to present a brief essay of their approved model car or other approved project and provide a description of the following information:

- Why did you choose this particular year make and model?
- What are the specifications, like horsepower, wheel-base, weight, torque, transmission type?
- What changes have occurred in the modern design as a response to emissions laws?
- What did you learn while building this project?
- Please submit a written copy of your presentation for grading.

Class Policies:

Please identify yourself by first and last name, and the course you are taking, for all communications. (For example: Brad McCombs Auto 170). Your name should be included in all communication.

Please use proper English when communicating. Courtesy and patience are mandatory when "replying" to other student "posts". Do not use abbreviations. ("btw" is spelled by the way.)

Communication technical requirements: You must have access to a computer and a high-speed Internet connection. It is preferred the computer you use have a microphone and camera for recording "chat messages" in discussion boards. You may use campus resources for a personal computer if you do not have your own.

Email: **My preferred method of contact is by email through your Blackboard student email account. I will answer all emails within 24 hours. If you do not receive a reply from me within 24 hours, please assume I did not receive your email and resend it. Please include a topic heading for all emails.**

Brad.mccombs@gcccd.edu

Telephone: My telephone number is (619)-660-4267 Office (619) 701-1226 Cell. I will return phone calls during business hours or answer immediately. If for some reason I don't answer my phone, leave a detailed message on my voicemail and I will call you back the same business day.

Drop Policies: Students may be dropped from this course if more than 4 classes or Laboratory Assignments are missed without an excused absence. Student's course grade may be dropped 1 grade letter if more than 4 classes are missed.

Late Work: if you do not complete an assignment within the week allowed for that assignment, you may appeal, and your maximum score will be adjusted to 70% regardless of your actual score. This policy only applies to emergency appeals for access to content.

Students with special needs or requiring additional help:

Please contact me directly if you are having trouble or require additional assistance or resources. We are here to help you succeed. There are also additional services at the following web link

Disabled Students Programs and Services We will be using a computer based learning system called Blackboard. Students requiring extra help with Blackboard can use the following resources: Computer Lab Tutoring

You Tube Video DSP&S

Homework and Quizzes: It is important students read the textbook chapters assigned for the classroom "Weeks" assignments before attending class. There will also be video assignments and other supplemental material found on your student Blackboard account. You be allowed to take formative quizzes as many times as necessary to attain the highest possible score during the time allotted for that quiz. Once a quiz is closed students will no longer have access to that quiz. Classroom written quizzes will be based on the reading assignments and the content posted on Blackboard.

Class Participation and Group Assignments: Students who participate in class discussions will do better. An attendance point system will be developed by the instructor and posted daily on your student Blackboard account. Students who come to class on time and finish the total classroom/lab hours will receive a total of 10 points students who are late or leave early without permission will have points deducted.

Class Participation Rubric

BELOW AVERAGE	AVERAGE	ABOVE AVERAGE	Points Possible
Student misses assignments or turns in assignments late (0 Points)	Student attains written permission or provides an accepted excuse. (5-7 Points)	Student is submits assignments on time. Student provides plenty of time for other students to respond to student posts. (8-10 Points)	All students start each module with all possible points. The points are documented in the grade center as the assignments are completed
Student does not participate in assigned	Student Participates in assigned tasks but does no	Student takes a leadership role in all assigned	Points are finalized at the end of each assignment. At

tasks. (0 Points)	take an active role or leadership role. (5-7 Points)	tasks. Student is willing to help others. (8-10 Points)	the end of the assignment points will either remain or be lowered.
Student violates the student code of conduct. (0 Points)	Student Does not violate the code of conduct, but does not take an active leadership role during assignments. Student does not provide enough time for other students to respond. (5-7 Points)	Student is polite and encourages others. Student always allows plenty of time for other student to respond to student posts. Student asks intelligent questions and helps others learn. (8-10 Points)	There are 10 points possible per class session for this grading rubric under class participation, and will account for 25% of the total grade points.

Lab Assignments: Each individual or group lab assignment will be posted on Blackboard for the week assignments. The lab may have a due date and a unique name so students may identify the lab assignment in the grade center.

Midterm and Final Exam: There will be a midterm and final exam. The midterm will consist of a written exam. The final will consist of a written exam and a "hands on" exam. The hands on exam will allow the student and instructor to spend a scheduled time examining the student's ability to apply the laboratory assignments learned throughout the semester.

Evaluation: A Plus/Minus grading system will be used for final grades. Example: 70-73% = C 74-76% = C 77-79% = C+

Class Participation	**25%**
Homework Quizzes	**25%**
Laboratory Assignments "Student Projects"	**25%**

Midterm and Final Exam	**25%**

Important Dates:

Spring 2017 Academic Calendar

Application Deadline (for appointment time)	October 28
Registration	November 14 - January 27
Intersession 2017	January 3 - 28
Last Day to Pay for Registration	January 12
Holiday (Martin Luther King Day)	**January 16***
Professional Development - Organizational Meetings	January 23 - 27
Regular Day & Evening Classes Begin	**January 30**
Program Adjustment	January 30 - February 10
Last Day to Drop without "W" (semester length classes)	February 10
Last Day to Apply for Refund (semester length classes)	February 10
Census Day (semester length classes)	February 13
Holiday (Lincoln's Birthday Observed)	**February 17 &**

	18*(Friday & Saturday)
Holiday (Washington's Birthday Observed)	**February 20***
Last Day to Apply for P/NP (semester length classes)	March 3
Last Day to Apply for Spring 2017 Degree/Certificate	March 10
End of First 8-Week Session	March 25
Spring Recess	**March 27 April 1**
Spring Holiday	**March 31 & April 1*(Friday & Saturday)**
Second 8 - Week Session Begins	April 3
Last Day to Drop Semester Length Classes	April 28
End of Second 8-Week Session	May 27
Holiday (Memorial Day)	**May 29***
Final Examinations	May 30 - June 5
Spring Semester Ends	June 5
Grossmont Commencement	June 7 (Wednesday)
Cuyamaca Commencement	June 8 (Thursday)

Instructor Grade Deadline	**June 8**

* College and District Offices Closed