El Camino College

COURSE SYLLABUS

Fall 2015

Course Information		
Course Title and Section:	**ATEC-26-7268**	**Credit Hours**: 4
Length of Course:	16 Weeks	**Contact Hours**: 6
Lecture/Lab Hours:	3 hours lecture & 3 hours lab	**Room**: 132 lecture 130 lab
Class Meeting Times:	Lecture: Tuesday 7:00PM-10:10pm Lab: Thursday 7:00PM-10:10pm	
Instructor:	Edward Matykiewicz	
Email:	ematykiewicz@elcamino.edu	
Phone:	(310) 660-3593 or Ext. 3593	
Office:		
Office Hours:	Monday through Thursday, 1:00pm-2:00pm	

Catalog Description

This course covers the study of advanced automotive testing and diagnostic procedures of the following systems: ignition, fuel, emissions, electrical and electronic, and computer control systems. Laboratory activities stress the proper use of diagnostic equipment utilized in the automotive field.

Prerequisites

A total of 8 units with a minimum grade of C is required from the following courses: Automotive Technology 22A, 23, 24, 25 or equivalent

Course Objectives

- Provide students training in the basic concepts, diagnostic skills, and service skills consistent with automotive industry standards for electrical circuits, engine performance, emissions devices, and CAN bus networks.
- Provide students with systems training designed to develop critical thinking skills, allowing the student to competently diagnose the complex service problems arising from the following automotive systems: starting/charging, ignition, computerized engine controls, fuel systems, and emission controls devices.
- Enhance students' reading, mathematical, writing, and communication skills necessary to compete successfully in the automotive service market.

- Develop in students an understanding of automotive industry business practices and ethical and professional conduct while serving the public's automotive needs.

Student Learning Outcomes

- Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.
- The student will be able to test the performance of the automotive computer controlled system using the Automotive Powertrain Control Module Data lab worksheet and manufacturer specifications.
- The student will test and evaluate engine condition and performance using an Engine Analyzer/Scanner lab worksheet to manufacturer specifications.

Weeks One and Two

Course Overview, Safety Policies, The Automotive Industry, Service information, and Basic Electrical Theory

- Explain the basic policies to be used in further automotive classes.
- Use tools & equipment in a safe manner that they're designed for.
- Describe the different possible types of hazards in working in the automotive industry.
- Describe the differences between different types hazardous waste.
- Name the various areas of the El Camino automotive shop.
- Describe the different types of vehicle identification that are used .
- Describe a visual inspection of the under hood components.
- Describe different kinds of automotive repair facilities.
- Understand how education provides a clear career path.
- Describe how to obtain various jobs in the automotive industry.
- Examine and gather information from Alldata.
- Understand vehicle emissions labeling's purpose and function.
- Examine and describe different wire diagrams.
- Define electrical connector cavity labeling.
- Understand how Ohm's law functions in an electrical circuit.
- Use digital volt, ohm meters for various electrical measurements.
- Examine what makes a series circuit.

Weeks Three and Four

Electrical Circuits, Batteries, Starters, and Charging

- Explain the difference between, parallel, and series/parallel circuits
- Describe Kirchhoff's law.
- Measure voltage drop in a circuit
- Explain the purpose of a battery.
- Describe the basic parts of an automotive battery.
- Compare conventional and maintenance-free batteries.
- Explain the chemical reaction that occurs to produce current in a battery.
- Test capacity and conductance of a battery.
- Describe how to slow-and fast-charge a battery.
- Describe different types of ratings used with batteries.
- Explain the effects of temperature on battery output.

- Explain safety precautions and rules associated with servicing batteries.
- Explain how a starter motor operates.
- Describe the common diagnostics used with the automotive starting/charging system.
- Explain the purpose of the starting/charging system.
- List components of the starting system, starting circuit, and control circuit.
- Explain how a starter motor operates.
- Identify the major components of the charging system.
- Explain the purposes of the major parts of an AC generator.
- **QUIZ ONE**

Weeks Five and Six

Gas/Diesel Engine Mechanical Operation/Diagnostic, Cooling and Ignition Systems

- Explain the four stroke process.
- List the components of the engine.
- Identify the process needed for compression testing & cylinder leak down testing.
- List the various causes of different kinds of exhaust color.
- Define the use of measuring engine vacuum.
- Describe the operation of the cooling system.
- List the components of the cooling system.
- Describe how to inspect the engine coolant.
- Compare the different types of belts used in various automotive applications.
- List spark plug heat range index.
- Compare the different causes for spark plug fouling.
- Explain how the ignition system functions.
- Identify firing order.
- List the causes for most ignition failures and how to diagnose them.
- Explain the function of the various parts of the ignition system.
- Describe the two electrical circuits used in the ignition system.

Weeks Seven and Eight

Ignition System Triggers, Ignition Modules, Distributor-Less Ignition, and Temperature Sensors

- Describe the function of the ignition module.
- Identify and describe the different devices used to trigger the ignition module.
- List the different diagnostic procedures used on various ignition triggering devices
- Explain the different types of distributor-less ignition systems.
- Define the difference between current sink and source
- Explain the operation and diagnostics of the engine coolant sensor ECT
- **MIDTERM EXAM**

Weeks Nine and Ten

Computer Sensors: Throttle Position, Manifold Pressure, and Mass Airflow Sensor

- Explain the function, operation and diagnostics of the throttle position, manifold pressure, and mass airflow sensor.
- Compare the different types of electrical signals produced by each of these sensors.
- Identify the different types of electrical signals using a digital oscilloscope.
- Describe alternative methods for diagnosing each of these sensors.

Weeks Eleven and Twelve

Gasoline, Fuel Systems' Parts and Operation, Alternative Fuels, Direct Injection,

Oxygen Sensors, and Vehicle Emissions

- Check fuel for contaminant and quality; determine necessary action.
- Identify the parts of the fuel system.
- Explain the purpose of the fuel system.
- Describe the components of a fuel delivery system and the purpose of each.
- Describe different fuel filter designs and mountings.
- Describe how to perform pressure tests on a mechanical and electric fuel pump.
- Explain the operation of an electric and a mechanical fuel pump.
- Explain the difference in point of injection in throttle body or port injection systems.
- Describe how to perform a preliminary diagnostic procedure on a fuel injection system.
- Explain fuel injector cleaning procedures on the MFI or SFI.
- Describe the test instruments used to test fuel injector operations.
- List the parts of a fuel pressure regulator and fuel pump.
- Perform a fuel pressure test and determine what the results are.
- List the different alternative fuel types used.
- Describe the operation of a direct injection engine.
- Explain the function, operation, and diagnostics of the oxygen sensor.
- Know the chemical make-up and causes of different types of exhaust gas.
- Describe the devices used to lower various vehicle emissions.
- Explain the function, operation, and diagnostics of various exhaust recirculation valves.
- **QUIZ TWO**

Weeks Thirteen and Fourteen

Scan Tool Diagnostics and Vehicle Emissions Control Devices: Evaporative Emissions System, Catalytic Converter, & the Positive Crankcase Ventilation

- Explain the function, operation, and diagnostics of the evaporative emissions system, catalytic converter, & the positive crankcase ventilation.
- Describe the function of different data displayed in Onboard Diagnostic II Modes 1-9.
- Define the difference between drive cycle, trip, and diagnostic monitor.
- Understand the different parameters used to set active/stored diagnostic trouble codes.
- Discuss how to use Bi directional controls in adding diagnostics.
- Explain the function, operation, and diagnostics of different communications networks.

Weeks Fifteen and Sixteen

PROJECT PRESENTATIONS & FINAL EXAM

Required Texts

Automotive Electricity and Electronics, **4th** edition (2014) by James D. Halderman.

- Pearson Prentice Hall, Upper Saddle River, NJ 07458.
- ISBN-13: 978-0-13-302774-7
- ISBN-10: 0-13-302774-0

Automotive Engine Performance, **4th** edition (2014) by James D. Halderman.

- Pearson Prentice Hall, Upper Saddle River, NJ 07458.
- ISBN-13: 978-0-13-302775-4
- ISBN-10: 0-13-302775-9

Required Materials

- safety eyewear
- basic hand tools
- one-inch, three-ring binder
- college-ruled notebook

Methods of Evaluation/Grade Scale

A – 90-100%	Excellent execution or competency. Minimal room for further development.
B – 80-89%	Above average execution or competency. Moderate room for further development.
C – 70-79%	Satisfactory execution or competency. Ample room for further development.
D – 60-69%	Substandard execution or competency. Significant room for further development.
F – 0-59%	The student's performance was inadequate relative to the established expectations for the course.

Quizzes	**50 points**	**4%**
Class Writing Assignment	**140 points**	**11%**
Mid-term exam	**125 points**	**9%**
Homework	**290 points**	**22%**
Project	**100 points**	**7%**
Lab exercises & participation	**500 points**	**38%**
Final exam	**125 points**	**9%**
Total	**1330 points**	**100% grade total**

Methods of Assessment

A student's grade will be based on multiple measures of performance:

- Grades from written quizzes and examinations
- Grades from practical examination of competency skills
- Completion of course assignments
- Class writing assignment
- Class participation and leadership
- Demonstrated skills competency in performing laboratory assignment
- Ability to internalize information and perform task requiring learned skills

Methods of Instruction

In this class, we will utilize various methods of instructions, including:

- Lectures
- Multimedia demonstrations
- In-class discussions based on assignments
- Computer-based training
- Lab-based learning
- Quizzes
- Class participation and leadership
- Writing assignments
- Homework assignments

- Reading assignments

Statement of Active Pursuit

No food. No sleeping. No phone use. Leaving during class – and coming and going in and out of the classroom during class in general – is unacceptable and will not be tolerated. Inattentiveness to the course material and other forms of inappropriate class behavior will result, at minimum, in a reduced grade. Students will be notified at the start of class when a break will be given.

No Show Policy

If a student registered for the course before the start time of the first class period but 1) did not attend the first two classes, or 2) attended only one of the first three classes and failed to notify the instructor of his or her intentions to continue the class, the student will be removed from the course.

Academic Integrity

***Plagiarism*:** El Camino College places a high value on the integrity of its student scholars. When an instructor determines that there is evidence of dishonesty in any academic work (including, but not limited to cheating, plagiarism, or theft of exam material), disciplinary action appropriate to the misconduct as defined in BP 5500 may be taken. A failing grade on an assignment in which academic dishonesty has occurred and suspension from class are among the disciplinary actions for academic dishonesty (AP 5520). Students with any questions about the Academic Honesty or discipline policies are encouraged to speak with their instructor in advance.

Cheating: Cheating of any kind is also a serious breach of academic integrity.

Penalties for Plagiarism and Cheating: In the first instance of academic integrity violation, the instructor will assign a grade of zero/F to the assignment and counsel the student accordingly. If a second violation occurs, the instructor will contact the Department Chair and Dean to determine a course of disciplinary action.

Accommodations

It is the policy of the El Camino Community College District to encourage full inclusion of people with disabilities in all programs and services. Students with disabilities who believe they may need accommodations in this class should contact the campus Special Resource Center (310) 660-3295, as soon as possible. This will ensure that students are able to fully participate.

Student Conduct

Students are expected to conduct themselves in a manner which is considerate of the rights of others and which will not impair the educational mission of the College. Misconduct for which students are subject to College Discipline (e.g. expulsion) may include the following: (1) all forms of dishonesty such as stealing, forgery, (2) obstruction or disruption of teaching, research, administration, disciplinary proceeding, (3) physical or verbal abuse, threats, intimidation, harassment, and/or other conduct that threatens or endangers the health or safety of any person, and (4) carrying or possession of weapons, ammunition or other explosives.

HOMEWORK

Homework will be assigned for each class session. Student should plan on 2 to 4 hours of homework per week. Homework will consist of reading assignments, review questions, and ASE

Certification-type questions from the required text. You are expected to complete the reading assignments and homework **before** they are covered in class. See course outline for homework schedule from text. Homework from text will be due at the start of each class session five minutes after the scheduled class start time. There will also be worksheets and other activities assigned as necessary; assigned worksheets and activities will be due the next class session. Homework assignments will be collected for credit.

Attendance

Be on time. If you are late, and do not call before the class start time, you may be asked to leave and will not receive credit for the assignment that day. Attendance is expected for all class meetings. If you are sick or have a personal emergency, **e-mail the instructor**. If you do not contact me, an unexcused absence will be recorded. There will be only **two** excused absences per semester. Absences will affect your grade and may impact whether you receive a passing grade for the class. Any student on the roster who does not attend the first two class sessions and does not contact the instructor may be dropped without notice. **If you attend the first few class sessions but then stop coming to class, it is YOUR responsibility to drop the class.**

Late Work & Make Up Work Policy

Late assignments (those that are submitted after 6:05pm on the due date) will **not** be accepted and cannot be made up after the assignment has been collected and discussed in class.

Makeup Exams

If a student knows he or she will miss an upcoming exam, he or she must notify the instructor **before** the exam date in order to schedule a makeup exam. Makeup exams will only be allowed if the instructor has been notified prior to missing the exam. In case of illness, jury duty, or other exceptional circumstances, a makeup exam may be offered only if the student brings the instructor an official note from a doctor, court official, or other authority.

QUIZZES/EXAMS

Exams will consist of written and hands-on portions; be prepared to work in the laboratory for the hands-on portion of each exam. One make-up exam is allowed if a student is absent for an exam due to illness or personal emergency. The student must make arrangements with the instructor for a make-up exam; it is the student's responsibility. In case of illness, jury duty, or other exceptional circumstances, a makeup exam may be offered only if the student brings the instructor an official documentation from a doctor, court official, or other authority. If no arrangements are made to make up the exam, the grade will be zero. **There is no make-up allowed for the final exam.**

Extra Credit

None

Week 1	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives		Syllabus Shop tour Equipment		Shop Safety Environmental	
Due Today				**Electricity CH 1, 2, & 10** **Chapter Quiz** **Safety Glasses**	

In Class Topic		Safety Jobs in Auto		VIN Information Schematics	
Mandatory Reading Due Today				Electricity CH 1, 2, & 10	

Week 2	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives		Electrical fundamentals		Series Circuits	
Due Today		**Electricity CH 3,4,& 8 Chapter Quiz**		**Electricity CH 5 Chapter Quiz**	
In Class Topic		Ohm's law		Electrical Measurements	
Mandatory Reading Due Today		Electricity CH 3,4,& 8		Electricity CH 5	

Week 3	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives		Parallel circuits and Series Parallel circuits		Batteries	
Due Today		**Electricity CH 6 & 7 Chapter Quiz**		**Electricity CH 17 & 18 Engine Performance CH 15 Chapter Quiz**	
In Class Topic		Voltage drop		Battery chemical reaction	
Mandatory Reading Due Today		Electricity CH 6 & 7		Electricity CH 17 & 18 Engine Performance 15	

Week 4	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives		Cranking system		Charging system	
Due Today		**Electricity CH 19 & 20 Chapter Quiz**		**Electricity CH 21 & 22 Chapter Quiz**	
In Class Topic		Starter system		How alternators work	
Mandatory Reading Due Today		Electricity CH 19 & 20		Electricity CH 21 & 22	

Week 5	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives		Cooling system		Gas/diesel engine operation	
Due Today		**Engine Performance CH 8,10,13,&14 Chapter Quiz**		**Engine Performance 3&4 Chapter Quiz**	
In Class Topic		coolant		What recharges the battery	
Mandatory Reading Due Today		Engine Performance 8,10,13,&14		Engine Performance 3&4	

Week 6	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives		Ignition system		Ignition system	
Due Today		**Electricity CH 13 Engine Performance 16 Chapter Quiz**		**Electricity CH 17 Engine Performance CH 9 Chapter Quiz**	
In Class Topic		Distributor-based ignition		Distributor-less ignition	
Mandatory Reading Due Today		Electricity CH 13 Engine Performance 16		Electricity CH 17 Electricity CH 9	

Week 7	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives		waste spark, & COP		**Lab-Exam**	
Due Today		**Ignition worksheet**		**Study**	
In Class Topic		MAP sensor		**Hands on Exam**	
Mandatory Reading Due Today					

Week 8	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives		**Testing** current sink/source		Computer fundamentals	
Due Today		**Lab binder**		**Electricity CH 14 &15 Engine Performance CH 20 Chapter Quiz**	

In Class Topic		**Written midterm Exam** / Sensor circuit		Temperature sensors	
Mandatory Reading Due Today		study		Electricity CH 14 &15 Electricity CH 20	

Week 9	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Objectives		Computer and network fundamentals		MAP	
Due Today		**Engine Performance 18,21,& 29 Chapter Quiz**		**Engine Performance CH 22 Chapter Quiz**	
In Class Topic		Fuel system		MAP	
Mandatory Reading Due Today		Engine Performance 18,21,& 29		**Engine performance CH 23**	

Week 10	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Objectives		Mass air flow		Fuel systems	
Due Today		**Engine Performance CH 23 Chapter Quiz**		**Engine Performance CH 5,26,& 27 Chapter Quiz**	
In Class Topic		Mass air flow		Gas Gas Gas	
Mandatory Reading Due Today		Engine Performance CH 23		Engine Performance CH 5,26,& 27	

Week 11	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Objectives		Alternative Fuels		Fuel Trim	
Due Today		**Engine Performance CH 6&7**		**Engine Performance CH 24,25,& 28 Chapter Quiz**	
In Class Topic		Fuel injector balance test		02 sensors	
Mandatory Reading Due		Engine Performance CH 6&7		Engine Performance CH 24,25,& 28	

Today					

Week 12	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives		emission standards		emission control devices	
Due Today		**Engine Performance CH 30&11 Chapter Quiz**		**Engine Performance CH 32 Chapter Quiz**	
In Class Topic		emission testing		EVAP How Why	
Mandatory Reading Due Today		Engine Performance CH 30&11			

Week 13	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives		emission control devices		CAN Bus	
Due Today				**Electricity CH 16 Chapter Quiz**	
In Class Topic		Catalytic converters operation		Bi directional controls	
Mandatory Reading Due Today				Electricity CH 16	

Week 14	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives		CAN Bus		Thanksgiving No Class	
Due Today		**Performance CH 33 Chapter Quiz**			
In Class Topic		Bi directional controls			
Mandatory Reading Due Today		Performance CH 33			

Week 15	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives		Final Project		Final Project	
Due Today		**Presentations In class Lab binders**		**Presentations In class**	

In Class Topic		Project		Hands on final exam: Part 1	
Mandatory Reading Due Today				Study	

Week 16	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives		Exam		Exam review	
Due Today		Hands on final exam part 1		Sign off on final exam	
In Class Topic		Final exam		Review exam & course evaluations	
Mandatory Reading Due Today					

CRITICAL DATES

Last Day to Drop Without Notation on Permanent Record	**Friday, September 4, 2015**
Last Day to Drop for an Enrollment Fee Refund	**Friday, September 4, 2015**
Last Day to Challenge Residency Stat for Current Semester	**Friday, September 4, 2015**
Labor Day Holiday (Campus Closed)	**Monday, September 7, 2015**
Last Day to Apply for Degrees and Certificates (Fall)	**Friday, October 9, 2015**
Veterans Day Holiday (Campus Closed)	**Wednesday, November 11, 2015**
Last Day to Drop with a "W"	**Friday, November 13, 2015**
Thanksgiving Holiday (Campus Closed)	**Thursday, November 26 – Sunday, November 29, 2015**
Last Day of Semester	**Friday, December 11, 2015**

SAFETY

Safety is paramount! Never perform any unsafe shop practice. Never operate any equipment or use any tool unless you have gone over the safety practices related to that particular piece of equipment. Immediately inform the instructor or shop foreman of any unsafe conditions in the classroom, in the shop or with a vehicle. Do not allow your fellow students to perform any unsafe shop practices. Shop safety practices and material use will be reviewed prior to going into the shop. Points covered will include tool safety, chemicals, and potential hazards when working on a vehicle. **SAFETY VIOLATIONS WILL NOT BE TOLERATED**. Safety violations may result in your grade being lowered or removal from the class, as deemed by the instructor.

LAB ACTIVITIES

The class will be divided into teams and each team will select a team leader. The team leader will be responsible for his or her team's performance during lab activities, assuring that shop safety practices are followed, tools and equipment are properly put away, and the assigned work area is cleaned after the activities. Each team member must complete all of the assigned lab activities. Lab

sheets for the week are the responsibility of each individual student to print. Printing can be done in the library, a public library, or a store with printing services. Students may not print their papers in the automotive lab.

Professional Attitude & Workmanship

Be respectful of others and their vehicles. Always use floor mats, seat covers, and fender covers. When servicing, troubleshooting, or repairing a vehicle, you are expected to make quality repairs, returning the vehicle to factory specifications. Carefully and completely perform each task. This includes verifying the repair has been make and the vehicle is safe to drive and in good working order, cleaning up your work area, and returning any tools and equipment to their proper location(s). Quality workmanship is required. Do not take shortcuts or be hasty when servicing, troubleshooting, or repairing vehicles. Always follow the manufacturer prescribed procedures. This course is designed to be approximately 1/2 lecture ,1/2 shop and lab activities. Some sessions will be all classroom, others all shop/lab, and some will be split. Be prepared for shop/lab activities at each class meeting. Discuss bringing in your own vehicle with the instructor. Relevant work may be permitted by the instructor on a case-by-case basis.

Tools & Equipment

SAFETY GLASSES ARE REQUIRED!!! You are expected to treat tools and equipment with the highest level of professionalism. These items are expensive and must be used by a large number of students each semester. Any abuse, misuse, or lack of care for tools or equipment will result in the loss of use. In regard to tool & equipment usage, you are expected to:

- Use them in accordance with safety guidelines
- Use them only for designed purposes
- Return them to the assigned location in the shop, tool room, or boxes at the end of each lab session (they are to be clean and properly put back in their case)
- Sweep and mop your work area after each lab session
- Wash shop vehicles as needed

Shop Clothing/ Food & Beverages

Your apparel should be professional. You are expected to wear appropriate shop clothing. When working in the shop, you **MUST WEAR SAFETY GLASSES AT ALL TIMES**, work boots/shoes (must enclose entire foot), and a shop type shirt and pants. Shorts are not acceptable. For safety, all jewelry must be removed and long hair must be tied back. Food and beverages are not allowed in the classroom or shop with the exception of water.

Computer Usage

Use of Automotive/Advanced Transportation desktop and laptop computers is restricted to course related work. Any abuse, misuse, or inappropriate use will result in loss of access to the computers. Any and all use must comply with El Camino College STUDENT CONDUCT STANDARDS and computer usage standards. Students may use computers for course work other than automotive depending on availability.

E-mail Policy

1. **Students must use the e-mail account provided by El Camino College as their official means of email communication for all business related to this course.** Any email that does not come directly from your El Camino College e-mail (*username*@elcamino.edu) may be filtered by spam or junk mail filters, may get deleted, or may get a delayed response. This means if you choose to forward your El Camino College e-mail account to some other

e-mail account (such as *username@comcast.net*, or *username@yahoo.com*, or *username @gmail.com*), then do **not** send a response to the instructor from that third party account. All responses should come directly from your El Camino College account.

2. **The subject line of all e-mail to the instructor must begin with the course number AND section number followed by the topic.** The course number and section for this course is: **ATEC-26-7268**. Here are some examples:
   Subject: ATEC-26-7268, Missed class - When is quiz #2?
   Subject: ATEC-26-7268, When will my Lab 3 grade be posted?
   Subject: ATEC-26-7268, Question on assignment 12
   Subject: ATEC-26-7268, Final Exam Date
   E-mail without a subject may not be read and will probably be deleted.

3. **The body of the e-mail must include at least one complete sentence AND be "signed" with your full first and last name.** When asking for help, please do your best to be specific about the question(s) and always "sign" your e-mail at the bottom by typing your full first and last name. If you are requesting a phone call back, include your phone number with area code.

AUTOMOTIVE STUDENT POLICY

- Students will arrive at their assigned classrooms at the scheduled start time of the class.
- Operation of any shop equipment without safety training is grounds for removal from the course.
- Before any vehicle can be inspected, serviced, diagnosed, or repaired, an El Camino College Repair Order must be completed including the ***signature of the registered owner***.
- No electronic recording devises are allowed without special permission from the instructor.
- Use of indecent or abusive language by students towards an instructor or fellow student will not be tolerated. Any student observed using such language will be dismissed from class for the remainder of the day. Repeated violation will result in disciplinary action up to and including dismissal from the automotive program.
- Students and instructors will make sure that areas in which they work are cleaned at the end of each class.
- Students will not solicit automotive repair work for personal gain (money).
- Student vehicle parking is restricted to the designated student parking lot. Students will not park their vehicles in the areas located on the entrance side of the Automotive Technology area unless authorized by the instructor. Vehicles found in violation of parking restrictions will be ticketed and/or towed.

- If you **leave class early** or **do not sign out** at the end of the day, you will lose points from the days activities. If leaving early **causes you to miss over two hours** of class time, it will automatically be considered an **absence** (see Attendance rules above).

- Report to the instructor any defective/inoperable equipment.

- Respect property belonging to other students or to the college.

- Prevent waste of materials.

- Students will supply their own set of hand tools for performing basic operations in the lab. Specialty tools are available through a check-out system from the tool room.

- Students are urged to have identification marks on all of their tools and equipment.

- Tools will be taken from the tool room using a tag checkout system. A PICTURE I.D. IS REQUIRED TO CHECK OUT ANY TOOLS/EQUIPMENT FROM THE TOOL ROOM.

- Tools must be cleaned before returning them to the tool room.

- All student projects must be removed from the automotive lab before the end of the semester. Projects left at the end of the semester will be disposed of.

Minimum tool list

1. Combination wrench set; metric/SAE
2. Socket set; 3/8" drive ratchet
3. 3/8” drive universal
4. 3/8” drive extensions (3”, 6”. 12”)
5. 3/8” drive metric/SAE 6 point sockets,
6. Standard screwdrivers (3 total), 2”, 4”, & 6”
7. Phillips screwdriver (3 total) **2** - No. 2 tip long and short & **1** - No. 3 tip long
8. Combination pliers 6"
9. Diagonal side cutters 6"
10. Needle nose pliers 6"
11. Allen wrench set (US & metric)
12. Torx driver set
13. Hammer, Ball peen
14. Rubber mallet
15. Tire pressure gauge
16. Feeler gauges Standard and metric

SAFETY GLASSES ARE REQUIRED FOR ALL AUTO TECH CLASSES

EL Camino College

COURSE SYLLABUS

Fall 2015

ATEC-26-7268

I have read and understand all of the regulations, requirements, and grading procedures of this course.

I acknowledge that the progression of the course outline presented by the instructor is a guideline and that actual course progression may differ.

I must strictly observe El Camino College's and the instructor's attendance requirements, safety regulations, shop rules, and student policies or be terminated from the course.

_____ _____

Signature **Date**