

**CUYAMACA COLLEGE
FORD ASSET PROGRAM
COURSE SYLLABUS
AT-196
ELECTRICAL, ACCESSORIES AND A.C.**

Instructor: Brad McCombs
Office: K124
Phone: (619) 660-4267
Email: brad.mccombs@gcccd.edu

Office Hours: I am also available for web conferences using [CCC Confer Office Hours](#). This allows you to use your computer from home and go over web based training course questions, or resolve other challenges you may be having. You must create a user ID login prior to making an appointment.

Monday	1:00 p.m. to 4:00 p.m. by appointment
Tuesday	1:00 p.m. to 4:00 p.m.
Wednesday	8:00 p.m. to 10:00 p.m. By CCC Tutoring
Thursday	1:00 p.m. to 4:00 p.m.
Friday	1:00 p.m. to 5:00 p.m. by appointment
CCC Confer Web Based Office Hours	7:00 p.m. to 10:00 p.m. Every day by Appt.

Figure 1 CCC Confer login page

Prerequisites:

- Admission to the ASSET Program.
- You must arrange cooperative work experience with a Ford Dealership.

- Safety Glasses
- Basic Hand Tools
- Dress Code (A Ford Uniform, or Accepted Ford Name Tag)

Books:

Student Guides: Electrical, Electronics, and Advanced Climate Control Systems must be purchased from the Automotive Department Tool Room. The cost should be around \$15 each?

Halderman Automotive Technology Principles, Diagnosis, and Service

ISBN 10: 0-13-399461-9

ISBN 13: 978-0-13-399461-2

This book can be purchased in the College Bookstore or you may find it online.

Course Description:

This course will include electrical systems, theory, diagnosis and repair procedures utilizing state-of-the-art equipment. Systems covered will be storage, generating and starting. Coverage of accessory systems such as lighting, cruise controls, electric windows, electronic dashboards, radios, windshield wipers, etc. Also covered in this course are all major topics dealing with automotive air conditioning, to include: refrigeration theory, system evacuation and recovery, leak repair, compressor repair, component replacement and manual and automatic temperature control. Preparation for A.S.E. testing will be emphasized.

Course Objectives: Upon completion of this course the student will be able to

1. Acquire safe working habits.
2. Relate air conditioning theory to diagnosis and repair.
3. Perform air conditioning repairs to industry standards.
4. Understand the laws of electricity.
5. Apply theory to electrical system troubleshooting.
6. Use carbon-pile electrical load testers and voltmeters as diagnostic tools.
7. Perform electrical system repair work to industry standards.

Textbooks: Various Ford Motor Co. texts will be used. You will be required to purchase the Ford Manuals, which will also be included in Blackboard as a Pdf. File.

Evaluation: A uniform grading system will be applied to all students in this class. Students must pass the Final performance test and written test with a score of 80% or higher in order to receive Ford Certification. Students who receive a score between 70% and 80% will receive college credit.

Class Participation	25%
Homework Quizzes	25%

Laboratory Assignments 25%
 Midterm and Final Exam 25%

A Plus/Minus grading system will be used for final grades. Example:
 70-73% = C- 74-76% = C 77-79% = C+ College credit towards Associate of Science Degree, No Ford Certification

0%-69% No College Credit, No Ford Certification

80%-100% College Credit and Ford Certification

Note: Students who become certified in a content area are able to perform that warranty service at a Ford Dealer while they are still in training during their cooperative work experience.

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 class or leaves class early or shows up to class late. (0 Points)	Student comes to class late or leaves class early, but asks permission or provides an excuse (5-7 Points)	Student is always on time. Student only leaves class with permission after completing assignments. (8-10 Points)	All students start with 10 possible points each day. The points are documented in the grade center at the beginning of class.
Student does not participate in assigned tasks. (0 Points)	Student Participates in assigned tasks but does not take an active role or leadership role. The student tends to watch others work. (5-7 Points)	Student takes a leadership role in all assigned tasks. Student is willing to help others. (8-10 Points)	Points are finalized at the end of class. At the end of class points will either remain at 10 or be lowered.
Student Violates Safety Rules. (0 Points)	Student Does not violate safety rules but needs to be asked what he or she is doing? Student does not clean work area or needs to be told to clean up.	Student is safe and encourages others to be safe. Student cleans the shop area and encourages others to clean up. (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.

	(5-7 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. There will be supplemental labs required that will be assigned and posted during each week.

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.

Class Policies:

Please identify yourself by first and last name, and the course you are taking, for all communications. (For example: Brad McCombs AT196). 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. 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. My mobile phone should be used for emergencies or issues you feel need my immediate attention (619) 701-1226.

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: [You Tube Resources for Students](#)

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 resource: [Cuyamaca College Computer Lab Computer Lab](#)

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.

Secure Web Logon

WARNING!
THIS IS A FORD MOTOR COMPANY PRIVATE COMPUTER SYSTEM. USAGE MAY BE MONITORED. UNAUTHORIZED ACCESS OR USE MAY RESULT IN CRIMINAL OR CIVIL PROSECUTION, DISCIPLINE UP TO AND INCLUDING TERMINATION OF EMPLOYMENT, TERMINATION OF ASSIGNMENT, OR LOSS OF ACCESS.

By signing on to the system I agree that, where consistent with applicable law: 1) I do not have any expectation of privacy in my use of the system, 2) My name and business contact information may be collected, processed, and stored by Ford in databases located in the U.S.A., and transferred among Ford and Ford's global affiliates (including the affiliates identified in Ford's most recent annual report on SEC Form 10-K available at the Ford corporate website) and their service providers for the purposes of my business relationship or arrangement with Ford, and 3) Ford actively monitors its information, systems, and data to identify and respond to security threats and losses, and any information or data identified through this monitoring may be shared among Ford and Ford's global affiliates and service providers, and provided to government authorities (including law enforcement).

Ford recognizes that in certain jurisdictions there are specific laws, regulations, and labor agreements that may apply, and Ford will comply with such requirements. [Click here for additional important terms and conditions.](#)

Enter your userid and password to login

Salaried Employees can login using their CDS ID and Password

USERID:

PASSWORD:

NOTE: PLEASE DO NOT SHARE YOUR USER ID OR PASSWORD WITH ANYONE

Dealers: To reset your password using your Q&A Profile, [click here](#).

Figure 2 Ford secure login warnings

Electronic Use Policies: [My Video Reflections of Acceptable Use](#)

We must recognize the differences and expectations of using electronic information for online learning. Technology has made information more accessible increasing the need of acceptable use policies, which are facilitated through Federal, State, and local laws and GCCCD college district.

Federal and State laws offer protections for copyright holders to make copies or facilitate the copying of the work they have created. Fair use provides for limited use of copyright material. These limitations are found in sections of [copyright law](#).

The purpose and character of the use, including whether such use is of commercial nature or is for nonprofit educational purposes

The nature of the copyrighted work

The amount and substantiality of the portion used in relation to the copyrighted work as a whole

The effect of the use upon the potential market for, or value of, the copyrighted work (1)

The law protects the creativity and innovations of copyright holders by limiting the unauthorized use of their work. This promotes creativity by awarding protections for intellectual property development, which benefits society by stimulating innovative ideas and artwork.

[Cuyamaca College Student Conduct and Discipline Procedures](#)

It is important to maintain a collegial conduct on campus, and this conduct extends to the online classroom. Privacy cannot be guaranteed when using campus computer systems or linking to Internet through campus resources. Treat all communication with values portraying higher learning.

The following quote was copied from the Cuyamaca College website:

“Your instructors are eager to help you succeed in your studies at Cuyamaca College. But success means more than just receiving a passing grade in a course. Success means that you have mastered the course content so that you may use the knowledge in the future, either to be successful on a job or to continue with your education” (Cuyamaca College Catalog, 2011-2012, p. 28). Therefore, dishonesty will not be tolerated in this course. This includes, but is not limited to, cheating, plagiarizing, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. Students who are found to be dishonest will receive academic sanctions, such as an “F” grade on the assignment or exam and will also be reported to the Associate Dean of Student Affairs for possible further disciplinary action. Sample 4 “Academic honesty is required of all students. Plagiarism--to take and pass off as one’s own work the work or ideas of another--is a form of academic dishonesty. Penalties may be assigned for any form of academic dishonesty”(Cuyamaca College Catalog, 2011-2012, p. 28). Sanctions for breaches in academic integrity may include receiving a grade of an “F” on a test or assignment. In addition, the Associate Dean of Student Affairs may impose further administrative actions.”

Blackboard Tools offers SafeAssignment, which is an electronic [plagiarism](#) checker.

GCCCD Social Media Guidelines:

Although online conversations on social media sites are often casual, they must remain professional and respectful. Comments on the colleges’ official pages are monitored to ensure compliance with the social networking guidelines. Inappropriate posts will be removed.

Content that will be deleted includes:

- **An advertisement for a commercial business**
- **Libelous, slanderous or defamatory comments**
- **Vulgar, racist or sexist slurs**
- **Obscenities**
- **Comments pertaining to violence**
- **Incorrect information**

- Information that violates student privacy under FERPA
- Comments that are not respectful
- Comments that are not relevant to the topic
- A commenter who is misrepresenting himself/herself
- A single person who is dominating the conversation
- We welcome photos, videos, and comments posted to the Cuyamaca College Facebook wall. Please review the GCCCD Social Media Guidelines if you are unsure the content you want to post is appropriate. We appreciate your cooperation.

[Is online learning right for me?](#)

[Support for online learning.](#)

E-Learning Modules:

Online Web-Based Training Classes: All of the following classes must be completed to be certified to perform AC service and electrical diagnosis and be certified to perform warranty service in these content areas at a Ford Dealership. Each module takes one to three hours to complete. The courses highlighted in red are the minimum required courses to pass AT 196 with a passing grade. Students who complete the minimum will not be certified to perform warranty repairs at a Ford dealership. The eight Week schedule is designed for students to complete two to three web - based courses per week.

Basic Electrical Theory and Operation	34S11W0
Battery Starting & Charging System Theory & Op	34S12W0
Electrical Diagnosis Tools and Testing I	34S13W0
Electrical Diagnosis Tools and Testing II	34S14W0
Electronics Theory and Operations	34S15W0
Understanding Electronic Systems	34S16W0
IDS - DTC's, PID's, DMM	30G11W1

Network Communication	34S27W0
IDS - O'scope, SGM, & PMI	34S28W0
Automotive Measuring Tools	32S02W0
Climate Control Theory and Operation	35S01W1
Electronic Climate Control Theory and Operation	35S03W0
Climate Control System Diagnosis	35S04W0
Hybrid Vehicle Components and Operation	30N26W2
2012 FOCUS ELECTRIC COMPONENTS AND OPERATION	30N41W0

FALL 2015 ACADEMIC CALENDAR

Registration	July 13 - August 14
Last Day to Pay for Registration	August 6
Professional Development - Organizational Meetings	August 10 - 14
Regular Day & Evening Classes Begin	August 17
Program Adjustment	August 17 - August 28
Census Day (Semester length Classes)	August 31
Holiday (Labor Day)	September 7*
Last Day to Apply for P/NP Semester Length Classes	September 18
Last Day to Apply for Fall 2015 Degree/Certificate	October 9
End of First 8-Week Session	October 10
Second 8 - Week Session Begins	October 12
Last Day to Drop Semester Length Classes	November 6
Holiday (Veterans' Day Observed)	November 11 (Wednesday)*
Holiday (Thanksgiving)	November 26, 27, 28*
End of Second 8-Week Session	Monday, December 7
Final Examinations	December 8, 9, 10, 11, 12, and 14
Close of Fall Semester	December 14
Winter Recess	December 15 - January 22
Instructor Grade Deadline	December 17
CSEA Recognition Day	December 23
College and District Offices Closed	December 24 - January 1*

* College and District Offices Closed

All Ford Web Based Training is due by Sunday at 11:59 p.m. the week it is assigned. This schedule is subject to change without notice. Not all workstations will be based on the workstation book. Labs will be based on the concepts of the Student Workbook. Supplemental labs will be assigned that are not on the schedule.

Date and lecture topic:	Assignments Labs	Home Work, Reading, or Deliverables	Tests and Quizzes CCC Confer Tutoring	Learning Objective
-------------------------	------------------	-------------------------------------	---	--------------------

8/24 M Power Point Presentation Basic Electrical Circuits	These labs and workstations are based on the Electrical Diagnosis and Repair Student Guide.	34S11W0 Basic Electrical Theory and Operation 34S12W0 Battery Starting & Charging System Theory & Op	Pre Test Review pages 1-13 in Electrical Diagnosis and Repair Student Guide.	Theory, operation, and testing of basic electrical circuits. Implement the SSCC diagnostic process. Demonstrate standardized safety and hazardous waste handling practices
8/25 Power Point Presentation Basic Electrical Circuits	Lesson 1 Workstation 1 Pages 17-32 Lesson 1 Workstation 2 Pages 33-40	Read Chapter 39 Electrical Fundamentals Halderman Read Chapter 40 Electrical Circuits and Ohms Law		
8/26 Power Point Presentation Basic Electrical Circuits	Lesson 1 Workstation 3 Pages 41-44 Lesson 1 Workstation 4 Pages 45-62	Read Chapter 41 Series, Parallel, and Series Parallel Circuits Read Chapter 42 Circuit Testers and Digital Meters	CCC Confer Tutoring 8 p.m. - 10 p.m.	
8/27 Power Point Presentation Wiring Diagrams Power Flow	Lesson 2 Workstation 1 Pages 2-5 -2-14	Read Chapter 44 Automotive Wiring and Wire Repair		
8/28 Power Point Presentation Circuit Fault Analysis	Lesson 2 Workstation 2 Circuit Fault Analysis Pages 2-15-2-23	Read Chapter 45 Wiring Schematics and Circuit Testing	Week 1 Quiz	
8/31 M Power Point	Lesson 2 Workstation 3 Starting System	34S13W0 Electrical Diagnosis Tools		

<p>Presentation Starting and Cranking</p>	<p>Diagnosis Pages 2-25-2-32</p>	<p>and Testing I 34S14W0 Electrical Diagnosis Tools and Testing II Read Chapter 50 Batteries Read Chapter 51 Battery Testing and Service Read Chapter 52 Cranking System</p>		
<p>9/1 Power Point Presentation Wiring Diagram Navigation</p>	<p>Lesson 2 Workstation 4 Wiring Diagram Navigation Pages 2-33-2-40</p>	<p>Read Chapter 59 Accessory Circuits</p>	<p>Lesson 2 Written Activity pages 2- 41- 2-47</p>	
<p>9/2 Power Point Presentation Wiring Diagram Diagnosis</p>	<p>Lesson 3 Workstation 1 High Mounted Stop Lamp and Horn Diagnosis Pages 3-9-3-16</p>	<p>Read Chapter 58 Horn Wiper and Blower Circuits</p>	<p>CCC Confer Tutoring 8:00p.m.-10p.m.</p>	
<p>9/3</p>	<p>Lesson 3 Workstation 2 Component Testing Pages 3-17- 3-30</p>		<p>Written Activity Draw a picture of a relay with a power source, fuse, relay, load, and switch</p>	<p>Written Activity Draw a picture of a relay with a power source, fuse, relay, load, and switch</p>
<p>9/4 Power Point Presentation Charging Systems</p>	<p>Lesson 3 Workstation 3 Pages 3-31- 3-36</p>	<p>Read Chapter 54 Charging System Read Chapter 55 Charging System Diagnosis and Service</p>	<p>Week 2 Quiz</p>	
<p>9/7 Labor Day M No Class</p>	<p>No Class</p>	<p>34S15W0 Electronics Theory and Operations 34S16W0</p>	<p>No Class</p>	<p>No Class</p>

		Understanding Electronic Systems		
9/8 Power Point Presentation Power Window Circuits	Lesson 3 Workstation 4 Power Window Circuit Pages 3-37 – 3-46	Read Chapter 48 Electronic Fundamentals		Demonstrate knowledge of applied electronic fundamentals
9/9 Power Point Presentation on Electronic Fundamentals	Lesson 4 Workstation 1 Circuit Testing Pages 4-5 – 4-14 Pages 4-15 – 4-20		CCC Confer Tutoring 8 p.m. - 10 p.m.	
9/10 Power Point Presentation on CAN Networks	Lesson 4 Workstation 2 Component Testing Pages 4-21 – 4-30	Read Chapter 49 CAN and Network Communications		
9/11 Power Point Power Window Switches	Lesson 4 Workstation 3 Power Window System Diagnosis Pages 4-31 – 4-36		Week 3 Quiz	
9/14 M	Lesson 4 Workstation 4 Wiper System Diagnosis Pages 4-37 – 4-45	30G11W1 IDS - DTC's, PID's, DMM 34S27W0 Network Communication		
9/15 Power Point Electronic Diagnosis and Repair The Oscilloscope	The following labs and workstations are based on the Electronic Diagnosis and Repair Student Guide. Lesson 1 Workstation 1 Inputs, Processing, and Outputs Pages 1-25 – 1-36	Prerequisite Review Pages 1-3 – 1-15 Read Chapter 71 Computer Fundamentals		Explain the theory and operation of electronic components and systems. Perform electronic diagnosis and repairs using available tools and service equipment. Implement the

				SSCC diagnostic process. Demonstrate standardized safety and hazardous waste handling practices
9/16 Power Point Electronic Inputs Thermistors	Lesson 1 Workstation 2 Electronic Inputs Pages 1-37 – 1-48	Read Chapter 72 Temperature Sensors	CCC Confer Tutoring 8 p.m. - 10 p.m.	
9/17 Power Point Permanent Magnet Sensors	Lesson 1 Workstation 3 Variable Reluctance Sensors Pages 1-49 – 1-62	Read Chapter 69 Ignition Components and Operation		
9/18 Power Point Electronic Circuits Phototransistor	Lesson 1 Workstation 4 Phototransistor Pages 1-63 – 1-70		Week 4 Quiz	
9/21 M Power Point Diagnostic Methods and Scan Tool Operation	Lesson 2 Workstation 1 Scan Tool Navigation Pages 2-3 – 2-12 Pages 2-13 – 2-24	34S28W0 IDS - O'scope, SGM, & PMI 32S02W0 Automotive Measuring Tools Read Chapter 88 Scan Tools and Engine Performance Diagnosis		
9/22 Power Point Lecture on Workshop Manual Description and Operation	Lesson 2 Workstation 2/1 Use service bulletins to answer charging system questions Pages 2-25 – 2-26	Read Chapter 15 Service Information		

	Lesson 2 Workstation 2/2 Pages 2-27 – 2-30			
9/23 Demonstrate Self-Test and Network Test	Lesson 2 Workstation 3 Self-Test and Network Test Pages 2-31 – 2-40		CCC Confer Tutoring 8 p.m. - 10 p.m.	
9/24 Demonstrate Network Topography	Lesson 2 Workstation 4 Network Research Pages 2-41 – 2-46			
9/25 Wiring Diagram Interpretation Adjustable Pedal Diagnosis	Lesson 3 Workstation 1 Adjustable Pedal Diagnosis Pages 3-5 – 3-8 Pages 3-9 – 3-18	Read Chapter 106 ABS Components and Operation	Week 5 Quiz	
9/28 M Demonstrate Service Publication for Diagnosis Trunk Lid Release Recording	Lesson 3 Workstation 2 Using Service Publications to Perform Diagnosis Pages 3-19 – 3-20 Lesson 3 Workstation 3 Trunk Lid Release Diagnosis Pages 3-21 – 3-25 Lesson 3 Workstation 4 Recording Pages 3-27 – 3-30	35S01W1 Climate Control Theory and Operation 35S03W0 Electronic Climate Control Theory and Operation 35S04W0 Climate Control System Diagnosis		
9/29	Lesson 4 Workstation 1	Written Activity Lesson 4		

<p>Heated Mirrors</p> <p>Defrost Concern</p>	<p>Heated Mirror Diagnosis</p> <p>Pages 4-5 – 4-12</p> <p>Lesson 4 Workstation 2 Rear Defrost Concern</p> <p>Pages 4 -13 – 4-14</p> <p>Lesson 4 Workstation 3 Charging System Diagnosis</p> <p>Pages 4-15 – 4-24</p> <p>Lesson 4 Workstation 4 CMT</p>	<p>Workstation 4 Written Activity Using Service Publications to Perform Diagnosis</p>		
<p>9/30</p> <p>Power Point Introduction to Advanced Climate Control Systems</p>	<p>The following labs and workstations will be based on the Advanced Climate Control Systems Diagnosis Student Workbook.</p>	<p>Introduction Lesson Review</p> <p>Read pages 1-1 – 1-28 and Answer the questions</p>	<p>CCC Confer Tutoring 8 p.m. - 10 p.m.</p> <p>Complete A/C Climate Control Pre Test</p>	<p>Demonstrate Knowledge of Climate Control Systems and Operations.</p>
<p>10/1</p> <p>Power Point Sealant Detector, Reclaim, Evacuation, and Recharge</p>	<p>Lesson 1 Workstation 1 Sealant Detector, Reclaim, Evacuation, and Recharge</p> <p>Pages 1-29 – 1-32 Pages 1 -33 – 1-38</p>	<p>Read Chapter 62 Heating and Air Conditioning</p>		
<p>10/2</p> <p>Power Point Component Testing and Refrigerant Oil</p>	<p>Lesson 1 Workstation 2 Component Testing and Refrigerant Oil</p> <p>Pages 1-39 – 1-44</p>	<p>Read Chapter 63 Automatic Air Conditioning System Operation</p>	<p>Week 6 Quiz</p>	

10/5 M AC System Operation and ACP Sensor Operation	Lesson 1 Workstation 3 AC System Operation and ACP Sensor Operation Pages 1-45 – 1-48	30N26W2 Hybrid Vehicle Components and Operation 30N41W0 2012 FOCUS ELECTRIC COMPONENTS AND OPERATION Read Chapter 64 Heating and Air Conditioning Systems Diagnosis		
10/6 Cooling System Tests, AC Safety and System Flushing	Lesson 1 Workstation 4 Cooling System Tests, AC Safety and System Flushing Pages 1-49 – 1-52	Read Chapter 65 Heating and Air Conditioning Service		
10/7 AC System Diagnosis and Testing	Lesson 2 Lectures Pages 2-3 – 2-20 Lesson 2 Workstation 1,2,3, and 4 WS 1 AC System Diagnosis 2-21 – 2-26 WS 2 Compressor Clutch Inoperative 2-27 – 2-28 WS 3 AC System Diagnosis 2-29 – 2-32 WS 4 Gauge Exercise and DATC Diagnosis 2-33 – 2-36		CCC Confer Tutoring 8 p.m. - 10 p.m.	
10/8	Lesson 3 Lecture Climate			

<p>Climate Controlled Seats</p>	<p>Controlled Seats Pages 3-3 – 3-8</p> <p>Lesson 3 Workstation 1 DATC Diagnosis</p> <p>Pages 3-11 – 3-13</p> <p>Lesson 3 Workstation 2 Climate Controlled Seats</p> <p>Pages 3-13 – 3-16</p> <p>Lesson 3 Workstation 3 AC System Diagnosis</p> <p>Pages 3-17 – 3-18</p> <p>Lesson 3 Workstation 4 SSCC Service and Repair Procedures</p> <p>Pages 3-19 – 3-24</p>			
<p>10/9</p> <p>Final Review</p>		<p>Review All Workbooks</p>	<p>CCC Confer Tutoring 8 p.m. - 10 p.m.</p> <p>Final Performance Test</p>	<p>Performance Test</p>
<p>10/10</p> <p>Grades Posted</p>				<p>Grades Posted</p>

Task Correlation Form:

The midterm and Final Performance Exams will be calculated by the end of the 8 Week Semester when students will be given chances to complete various hands on performance labs and written objective tests. These scores will include the highest score calculated during the specific written test or performance test for each section.

Make Up work or extra credit may only be applied based on a written appeal or excused absense.

Task	Points Possible	Points Scored Category	Date Due	Certified or Not/ Points Scored
34S11W0 Basic Electrical Theory and Operation	10	Homework Quizzes	8/24/15	
34S12W0 Battery Starting & Charging System Theory & Op	10	Homework Quizzes	8/24/15	
Lesson 1 Workstation 1 Pages 17-32 Lesson 1 Workstation 2 Pages 33-40	20	Labs	8/25/15	
Lesson 1 Workstation 3 Pages 41-44 Lesson 1 Workstation 4	20	Labs	8/26/15	

Pages 45-62				
Lesson 2 Workstation 1 Pages 2-5 -2-14	10	Labs	8/27/15	
Lesson 2 Workstation 2 Circuit Fault Analysis Pages 2-15-2-23 Quiz 1	10	Labs	8/28/15	
	10	Homework Quizzes	8/28/15	
Lesson 2 Workstation 3 Starting System Diagnosis Pages 2-25-2-32	10	Labs	8/31/15	
34S13W0 Electrical Diagnosis Tools and Testing I	10	Homework Quizzes	8/31/15	
34S14W0 Electrical Diagnosis Tools and Testing II	10			
Lesson 2 Workstation 4 Wiring Diagram Navigation Pages 2-33-2-40	10	Labs	9/1/15	
Lesson 2 Written Activity pages 2- 41- 2-47	10	Homework Quizzes	9/1/15	
Lesson 3 Workstation 1 High Mounted Stop Lamp and Horn Diagnosis Pages 3-9-3-16	10	Labs	9/2/15	

Lesson 3 Workstation 2 Component Testing Pages 3-17- 3-30	10	Labs	9/3/15	
Written Activity Draw a picture of a relay with a power source, fuse, relay, load, and switch	10	Homework Quizzes	9/3/15	
Lesson 3 Workstation 3 Pages 3-31- 3-36	10	Labs	9/4/15	
Week 2 Quiz	10	Homework Quizzes	9/4/15	
34S15W0 Electronics Theory and Operations	10	Homework Quizzes	9/7/15	
34S16W0 Understanding Electronic Systems	10			
Lesson 3 Workstation 4 Power Window Circuit Pages 3-37 – 3-46	10	Labs	9/8/15	
Lesson 4 Workstation 1 Circuit Testing Pages 4-5 – 4-14 Pages 4-15 – 4-20	10	Labs	9/9/15	
Lesson 4 Workstation 2 Component Testing Pages 4-21 – 4-30	10	Labs	9/10/15	
Lesson 4 Workstation 3 Power Window	10	Labs	9/11/15	

System Diagnosis Pages 4-31 – 4-36				
Week 3 Quiz	10	Homework Quizzes	9/11/15	
Lesson 4 Workstation 4 Wiper System Diagnosis Pages 4-37 – 4-45	10	Labs	9/14/15	
30G11W1 IDS - DTC's, PID's, DMM 34S27W0 Network Communication	10 10	Homework Quizzes	9/14/15	
Lesson 1 Workstation 1 Inputs, Processing, and Outputs Pages 1-25 – 1-36	10	Labs	9/15/15	
Prerequisite Review Pages 1-3 – 1-15 Read Chapter 71 Computer Fundamentals	10	Homework Quizzes	9/15/15	
Lesson 1 Workstation 2 Electronic Inputs Pages 1-37 – 1-48	10	Labs	9/16/15	
Lesson 1 Workstation 3 Variable Reluctance Sensors Pages 1-49 – 1-62	10	Labs	9/17/15	
Lesson 1 Workstation 4 Phototransistor Pages 1-63 – 1-70	10	Labs	9/18/15	

Quiz 4	10	Homework Quizzes	9/18/15	
Lesson 2 Workstation 1 Scan Tool Navigation Pages 2-3 – 2-12 Pages 2-13 – 2-24	10	Labs	9/21/15	
Week 5 Quiz	10	Homework Quizzes	9/21/15	
Lesson 2 Workstation 2/1 Use service bulletins to answer charging system questions Pages 2-25 – 2-26 Lesson 2 Workstation 2/2 Pages 2-27 – 2-30	10	Labs	9/22/15	
Lesson 2 Workstation 3 Self-Test and Network Test Pages 2-31 – 2-40	10	Labs	9/23/15	
Lesson 2 Workstation 4 Network Research Pages 2-41 – 2-46	10	Labs	9/24/15	
Lesson 3 Workstation 1 Adjustable Pedal Diagnosis Pages 3-5 – 3-8 Pages 3-9 – 3-18	10	Labs	9/25/15	
Quiz 5	10	Homework	9/25/15	

<p>Lesson 4 Workstation 3 Charging System Diagnosis</p> <p>Pages 4-15 – 4-24</p>	10			
<p>Lesson 4 Workstation 4 CMT</p>	10			
<p>Lesson 4 Workstation 1 Heated Mirror Diagnosis</p> <p>Pages 4-5 – 4-12</p>	10	Labs	9/29/15	
<p>Lesson 4 Workstation 2 Rear Defrost Concern</p> <p>Pages 4 -13 – 4-14</p>	10			
<p>Lesson 4 Workstation 3 Charging System Diagnosis</p> <p>Pages 4-15 – 4-24</p>	10			
<p>Lesson 4 Workstation 4 CMT</p>	10			
<p>Written Activity Lesson 4 Workstation 4 Written Activity Using Service Publications to Perform Diagnosis</p>	10	Homework Quizzes	9/29/15	
<p>Lesson 1 Workstation 1 Sealant Detector,</p>	10	Labs	10/1/15	

Reclaim, Evacuation, and Recharge Pages 1-29 – 1-32 Pages 1 -33 – 1-38				
Lesson 1 Workstation 2 Component Testing and Refrigerant Oil Pages 1-39 – 1-44	10	Labs	10/2/15	
Week 6 Quiz	10	Homework Quizzes	10/2/15	
Lesson 1 Workstation 3 AC System Operation and ACP Sensor Operation Pages 1-45 – 1-48	10	Labs	10/5/15	
30N26W2 Hybrid Vehicle Components and Operation 30N41W0 2012 FOCUS ELECTRIC COMPONENTS AND OPERATION	10 10	Homework Quizzes	10/5/15	
Lesson 1 Workstation 4 Cooling System Tests, AC Safety and System Flushing Pages 1-49 – 1-52	10	Labs	10/6/15	

<p>Lesson 2 Lectures</p> <p>Pages 2-3 – 2-20</p> <p>Lesson 2 Workstation 1,2,3, and 4</p> <p>10</p> <p>WS 1 AC System Diagnosis 2-21 – 2-26</p> <p>WS 2 Compressor Clutch Inoperative 2-27 – 2-28</p> <p>10</p> <p>WS 3 AC System Diagnosis 2-29 – 2-32</p> <p>10</p> <p>WS 4 Gauge Exercise and DATC Diagnosis 2-33 – 2-36</p>		<p>Labs</p>	<p>10/7/15</p>	
<p>Lesson 3 Lecture Climate Controlled Seats Pages 3-3 – 3-8</p> <p>Lesson 3 Workstation 1 DATC Diagnosis</p> <p>10</p> <p>Pages 3-11 – 3-13</p> <p>Lesson 3 Workstation 2 Climate Controlled Seats</p> <p>10</p>		<p>Labs</p>	<p>10/8/15</p>	

