



**Course Syllabus
SEMESTER
School of STEM**

<i>Course Name:</i>	Vehicle Electric & Electronics
<i>Course & Section Number:</i>	AUT 130-XXX
<i>Meeting Day(s) & Time(s):</i>	
<i>Credits:</i>	3
<i>Contact Hours:</i>	2 Lecture 3 Lab
<i>Instructor's Name:*</i>	
<i>Office Hours & Location:</i>	
<i>OCC Phone:</i>	
<i>OCC Email:**</i>	

Catalog description:

Basics of electricity and electronics for Automotive Technicians are presented. Electrical theories, operation of series, series/parallel and parallel circuits are studied. Lab experiences include the construction and operation of circuits through the use of semiconductors and circuit boards. The practical application of Ohm's law is stressed throughout the entire course.

Prerequisite/Corequisites: MTH 089 or equivalent

Course Materials:

State the name of the text, course materials, and all required readings.
MODERN AUTOMOTIVE TECHNOLOGY (TEXT + COMMON CARTRIDGE FOR LMS,
1YR. INDV. ACCESS KEY PACKET)
JAMES DUFFY
ISBN13: 9781649254153
EDITION: 10TH
FORMAT: PAPERBACK W/ ACCESS CODE

PUBLISHER: GOODHEART WILCOX COMPANY
COPYRIGHT: 1/1/2022

*If a **print book, e-book, or access code** is required for class, you can access the Owens Community College e-Campus Bookstore by accessing the online link, called “Find Books” on the course schedule for each course section. See the example below.*

OER and Owens Community College Library Resources (Open Educational Resources are free online materials for instructor and student use. Some OER material may be available in print in the Owens Community College Library.)

Inclusive Access (I.A.) Materials are included in the cost of the course to save students money through lower negotiated rates with publishers. Courses containing I.A. materials will have it noted on the online class schedule. If your course includes I.A. digital materials, you will receive an email with subject line, “Your inclusive Access Materials,” and it will include any codes or digital links.

The email will come to your Owens Community College email from the Owens e-Campus Bookstore on the first day of class, if not before. Be sure to check your spam (junk email) if you do not find it in your inbox. If the email is not in your inbox or spam folder, contact your instructor immediately. You may also see a folder at the top of your course labelled “Course Materials by eCampus.” This folder will contain any needed codes or links to needed materials.

If the I.A. materials also include a printed book or are in print form, the item will be shipped to your address of record automatically based on your enrollment in the course. Please note that some courses do not include printed materials in I.A. and those materials would need to be purchased separately using the link on the course schedule. When you access the Find Books link you will see which items in a course are included in I.A.

Technology, Lab, and File Requirements:

Alldata <https://my.alldata.com/ip>

Shop Key Pro “no pass word needed”

Identifix: UN NAME PW: NAME

Academic Support

Disability Services Resource Center: If you have a disability or acquire one, you may be entitled to receive reasonable accommodations intended to assure you an equal opportunity to participate in and benefit from the program. To receive more information or to register for accommodations, please contact the Disability Resource Center at 567-661-7007, email disability@owens.edu, visit <https://www.owens.edu/disability/>, or stop by College Hall 124.

Tutoring Services: Owens Community College offers academic tutoring and assistance in a variety of subjects including: accounting, computing, economics, mathematics, science, and writing. For more information go to: <https://www.owens.edu/successcenters/>.

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Students can find more information on campus resources, student support, student life, and security at this [link](#).

General Information

Student Code of Conduct: All students are expected to follow Owens Community College's Student Code of Conduct, which includes academic honesty, encompassing plagiarism. See the Board Policy for more information.

Anti-Discrimination and Harassment & Title IX/Sexual Misconduct: All students, faculty, and staff are expected to follow Owens Community College's Anti-Discrimination and Harassment Policy and the College's Title IX Policy/Sexual Misconduct Procedures and Guidelines. The College strictly prohibits and will not tolerate harassment, discrimination, intimidation, or hostile/offensive working or learning environments.

Religious Accommodations: A student seeking an accommodation for an absence permitted under Ohio's Testing Your Faith Act must provide the instructor with a written email notice with the specific dates for an absence, and must do so not later than fourteen (14) days after the first day of instruction. Alternative accommodations are not retroactive, and no academic penalty will be imposed for an absence under the policy*. The request for an alternative accommodation will be kept confidential. Students with questions about a religious accommodation under Ohio's Testing your Faith Act may contact the College's Office of Academic Affairs: provost@owens.edu. The policy may be found on the Owens website: [3358:11-2-63 Accommodation](#) for a Student Absence for the Observance of Religious Beliefs and Practices Policy

Document Collection: Throughout the semester, your instructors may ask for a variety of assignments including tests and/or quizzes for student learning of institutional general education competencies or program assessment. Please save all your class materials until the end of the semester.

Classroom Admittance: OCC classes shall only be attended by the officially registered OCC students or perspective students, instructor of record, guest lecturer, or substitute. Visitors are not permitted to be in the classroom and should not be invited to attend or participate in the class. See

[FERPA](#) regulations for more information.

Student Responsibilities & Instructor Expectations

Instructor Expectation

Specific Course Rules & Classroom Procedures:

1. The student is responsible for all material discussed in class, handed out, seen or heard in visual/audio, or written on the board.
2. The student is responsible for all work assigned whether discussed in class or not.
3. Any missed classes, tests, or assignments must be made up by the end of the semester through agreement with the instructor.
4. The instructor, with permission of the chairman, whenever appropriate and necessary, reserves the right to amend, adjust, or deviate from the course outline and lecture topic areas to assure the students of the best possible education from the course.

Safety Glasses

Students will not be permitted to attend lab classes without the required safety glasses.

Safety

Since personal safety is a major concern of both this College and the employers, students will be expected to conduct themselves in a safe manner at all times. Students will be required to follow safety requirements pertaining to: safety glasses, clothing, labs, and work procedures. (Remember SAFETY is everyone's job!)

- Computer Headphones are required.
- ABSOLUTELY NO DOWNLOADING IN COMPUTER LAB.

Specific Course Rules: (This can include but is not limited to: policies on attendance, make-up/late work, class participation, tape recording, cell phone use, and electronic device use.)

Lab Safety Policy

Safety is very important for everyone. Safety guidelines are to be adhered to in performing all tasks.

1. Safety glasses must be worn at all times upon entering the lab areas. No exceptions.
2. Proper clothing and shoes are to worn in the labs.
3. Full-length pants, proper work short sleeve or long sleeve shirts, and appropriate industry related footwear (non-slip soles, puncture proof material, steel toe, etc.) must be worn in the lab areas.
4. Loose clothing, scarves, ties, shorts, jewelry, etc. are not permitted while working in the labs. Long hair should be pulled up.

5. Hearing protection, masks, gloves, and respirators should be used when directed by your instructors.
6. Be aware of your surroundings and report anything potentially unsafe to your instructor or other college employee. When in doubt ask!

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General Information

For information on FERPA, Cheating and Plagiarism, Assessment of Student Learning Outcomes and Student Code of Conduct, please refer to the appropriate section of the current Owens Community College Catalog online

What You Will Learn in the Course

Course Objectives:

Students will:

Course Outcomes:

The student given the vehicle or component and the tools and equipment will, with at least 90% accuracy:

1. Identify resistors by color code.
2. Identify & construct electrical circuits.
3. Read and interpret wiring diagrams.
4. Demonstrate the operation procedures of test meters.
5. Perform wiring repairs.

Student Learning Outcomes:

TASK LIST

Throughout the term of this course, students will perform or have demonstrated to them the following tasks. All tasks must be performed according to manufacturer instruction/requirements, any deviation must be approved by the instructor prior to the next step.

1. Use wiring diagrams during diagnosis of electrical circuit problems.
2. Check electrical circuits with a test light; determine necessary action.
3. Check voltage and voltage drop in electrical/electronic circuits using a digital multimeter (DMM); determine necessary action.
4. Check current flow in electrical/electronic circuits and components using an ammeter; determine necessary action.

5. Check continuity and resistances in electrical/electronic circuits and components with an ohmmeter; determine necessary action.
6. Check electrical circuits using jump wires; determine necessary action.
7. Locate shorts, grounds, opens, and resistance problems in electrical/electronic circuits; determine necessary action.
8. Measure and diagnose the cause(s) of abnormal key-off battery drain; determine necessary action.
9. Inspect and test fusible links, circuit breakers, and fuses; determine necessary action.
10. Inspect and test switches, connectors, relays, and wires of electrical/electronic circuits; perform necessary action.
11. Repair wiring harnesses and connectors.
12. Perform solder repair of electrical wiring.
13. Obtain and interpret digital multimeter (DMM) readings.
14. Inspect and test power and ground circuits and connections; service or replace as needed.
15. Practice recommended precautions when handling static sensitive devices.
16. Demonstrate the proper use of a digital multimeter (DMM) during diagnosis of electrical circuit problems.
17. Demonstrate knowledge of electrical/electronic series, parallel, and series-parallel circuits using principles of electricity (Ohm's Law).
18. Demonstrate knowledge of the causes and effects from shorts, grounds, opens, and resistance problems in electrical/electronic circuits.
19. Replace electrical connectors and terminal ends.

Grading Procedure:**GRADE COMPILATION:**

Lab	60%
Quiz	30%
Final Exam	10%
Total	100%

GRADE SCALE:

94-100	A
87-93	B
78-86	C
70-77	D
0-69	F

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Use of AI:

The Use of AI may be or not be appropriate for this course. Sample language that defines the level of AI used it is permitted. If you are interested in the full article, please click on this [link](#). The following statements are adapted from conversations with a variety of generative AI tools using policies from a variety of universities to jump-start the statements. Each of these statements can be edited and customized for your coursework and preferences. You may want to consider having policies/statements for each assignment rather than an overall policy. Some instructors simply consider AI use to fall under the Board Policy 3358:11-2-33 Cheating and Plagiarism. (Remove this statement from your finished product.)

INSTRUCTOR RESTRICTIONS

Student Responsibilities & Instructor Expectations

Instructor Expectations:**Classroom Environment: (optional)**

How Grades and Determined and Major Assignments

Evaluation Measure The grade points for the areas of work are as follows.	Student Learning Outcomes Assessed	Value
Essay 1	1-6	200 points
Essay 2	1-6	200 points
Midterm	1-3; 5-6	150 points
Group Project	1-6	300 points
Final	1-6	150 points
Total		1000 points

The final course grade is to be computed using the following weights.

Evaluation Measure	Value	Student Learning Outcome Assessed
Class Participation:	5 %	1-14
Activities:	15%	1-14
Homework:	10%	
Projects (3 projects):	30%	
Project Presentations:	10%	
Quizzes (6 quizzes):	20%	
Final Project:	10%	

Grading Scale

Grade	Points
A	900-1000
B	800-899
C	700-799
D	600-699
F	0-599

Grading Procedure:

Grades will be calculated on the following scale.

90% and Above	A
80% to Less than 90%	B
70% to Less than 80%	C
60% to Less than 70%	D
Less Than 60%	F

Tentative Class Assignments:

Disclaimer: The instructor reserves the right to amend this syllabus as deemed necessary and will communicate such amendment to the students in the course. Please note that while unlikely, there is a possibility courses might need to change the delivery method due to external issues like public health concerns, weather issues, etc. If this happens, the college will communicate any changes via email and/or other communication methods.