

Electrical & Electronics II

AUTO2160 001

Instructor Information

[REDACTED]

Phone: [REDACTED]

Email: [REDACTED]

Office Location: [REDACTED]

Office Hours

[REDACTED]

Best Time to Contact: [REDACTED]

[REDACTED]

Course Description

This ASE-EF accredited course continues the study of automotive electrical and electronic systems. Students demonstrate their proficiency in the diagnosis, repair, and service of modern automotive electrical systems using electrical measuring devices and wiring diagrams. This lecture/lab course is part 2 of a 3-part course. It is recommended that students take AUTO 2130 and AUTO 2120 in the same semester as this course.

Prereq: Successful completion of all TEAU (SLTC) Courses: TEAU 1010, TEAU 1050, TEAU 1100, TEAU 1140, TEAU 1150, TEAU 1160, TEAU 1210, TEAU 1240, TEAU 1250, and TEAU 1270.

Semester(s): All

This Automotive Service Excellence- Education Foundation (ASE-EF) accredited course continues the study of automotive electrical and electronic systems. Students demonstrate their proficiency in the diagnosis, repair, and service of modern automotive electrical systems using electrical measuring devices and wiring diagrams. This lecture/lab course is part 2 of a 3-part course. It is recommended that students take AUTO 2130 and AUTO 2120 in the same semester as this course.

Course Student Learning Outcomes

- Demonstrate proficiency in ASE-EF Electrical/Electronic Systems Automobile Service Technology (AST) Tasks in accordance with industry standards.
- Assigned lab work to complete in a professional manner, by working in teams in automotive labs that emulate industry automotive shops.

College Wide Student Learning Outcomes

- Maintain vehicle safety through safe electrical maintenance and repairs.
- Identify and repair electrical/electronic series, parallel, and series-parallel circuits using principles of electricity (Ohm's Law).
- Identify and repair the causes and effects from shorts, grounds, opens, and resistance problems in electrical/electronic circuits.
- Identify and demonstrate proper use of a digital multimeter (DMM) when measuring source voltage, voltage drop (including grounds), current flow and resistance.
- Identify and repair automotive electrical/electronic systems including battery systems, charging systems, starting systems, and lighting systems.

Course Prerequisites

Completion of the SLTC Automotive Undercar Specialist Courses.

Transfer/Certification/Licensure/Employment Information

For state and national occupation information, visit O*Net and enter the following code(s):

- 49-3023-.01 Automotive Master Mechanics

- 49-3023-.02 Automotive Specialty Technicians

* The U.S. Education Department now requires institutions to provide Gainful Employment information to prospective students that provide consumer information on program costs, student debt and completion. The above Career & Program information will provide a comparison between similar programs at different institutions.

Communication Plan

Example language:

- I will respond to email within 24 to 48 hours. I will offer feedback on major assignments within 5 days. The best way to contact me is via the Canvas Inbox, as I will prioritize this message system over other modes of communication.
- I will share in the classroom discussions with you to share my perspective within the discipline and to offer some nuances of interpretation that may not be present in your textbook.
- Lastly, in class and in the lab we will be working in teams where we can learn from our peers (and faculty) on some of the more difficult units within the course.

Keys for Success (how to succeed in the course)

The successful student reads the chapter materials, participates in the class discussions, and practices their skills in the hands-on activities.

Required Text or Materials

Title: Todays Technician Automotive Electrical and Electronics 7th Edition

Subtitle: Book set includes Classroom and Shop Manual

ISBN: 978-1-3376-1899-1

Authors: Barry Hollembeak

Publisher: Cengage Learning

Publication Date: 2019

Edition: 7th Edition

OID: <https://www.cengage.com/c/today-s-technician-automotive-electricity-and-electronics-classroom-and-shop-manual-pack-spiral-bound-version-7e-hollembeak/9781337618991/?searchisbn=978-1-3376-1899-1>

For more information on textbook accessibility, contact Accessibility & Disability Services at ads@slcc.edu.

Assignment Schedule

Due Date	Assignment Name	Assignment Type	Points
	A-Tech Charging System	Assignment	25
	A-Tech Lighting System	Assignment	25
	A-Tech Power Door Locks	Assignment	25
	A-Tech Power Seats	Assignment	25
	A-Tech Starting System	Assignment	25
	Acknowledgement of Syllabus	Quiz	1
	CL 19-19 Quiz 6: Expected Voltage	Assignment	20
	CL-1919 # 13 Assignment	Assignment	13
	CL-1919 #10 Assignment	Assignment	3
	CL-1919 #11 Assignment	Assignment	5

Due Date	Assignment Name	Assignment Type	Points
	CL-1919 #12 Assignment	Assignment	13
	CL-1919 #14 Assignment	Assignment	8
	CL-1919 #15 Assignment	Assignment	8
	CL-1919 #6 Assignment	Assignment	15
	CL-1919 #7 Assignment	Assignment	7
	CL-1919 #8 Assignment	Assignment	2
	CL-1919 #9 Assignment	Assignment	4
	CL-1919 Prequiz: Ohms Law	Quiz	0
	CL-1919 Quiz 1: Ohms Law	Quiz	12
	CL-1919 Quiz 2: Series Circuit	Quiz	5
	CL-1919 Quiz 3: Voltage Drop Testing	Quiz	5
	CL-1919 Quiz 4: Parallel Circuit	Quiz	10
	CL-1919 Quiz 5: Combo Circuit	Quiz	7
	Final Exam	Assignment	200

Due Date	Assignment Name	Assignment Type	Points
	Introduce Yourself	Discussion	0
	Introduce Yourself	Discussion	0
	Job Sheet 22	Assignment	30
	Job Sheet 32	Assignment	20
	Job Sheet 37	Assignment	20
	Roll Call Attendance	Assignment	100
	Schematic Reading - EVTM - Horn Circuit	Assignment	20
	Schematic Reading - EVTM - Power Mirrors	Assignment	25
	Schematic Reading - EVTM - Power Windows	Assignment	20
	Schematic Reading - EVTM -Power Door Locks	Assignment	20
11/7	Chapter 1 Fill-in-blank	Assignment	10
11/11	Chapter 1 Quiz	Quiz	20
11/11	Chapter 1 Quiz	Quiz	20
11/12	Chapter 2 Fill-in-blank	Assignment	10
11/12	Chapter 2 Quiz	Quiz	20
11/14	Chapter 3 Quiz	Quiz	20
11/14	Chapter 3 Fill-in-blank	Assignment	10
11/18	Chapter 4 Fill-in-the- blank	Assignment	10

Due Date	Assignment Name	Assignment Type	Points
11/18	Chapter 4 Quiz	Quiz	20
11/19	Case Study #2	Assignment	23
11/19	Case Study #1	Assignment	30
11/20	Chapter 5 Quiz	Quiz	20
11/20	Chapter 5 Fill-in-the-blank	Assignment	10
11/25	Chapter 6 Quiz	Quiz	20
11/25	Chapter 6 Fill-in-the-blank	Assignment	10
11/26	Case Study #3	Assignment	18
11/28	Chapter 7 Fill-in-the-blank	Assignment	10
12/2	Chapter 7 Quiz	Quiz	20
12/3	Job Sheet 4	Assignment	30

Brief Description of Assignments/Exams

The course has hands-on job sheets and other live work assignments as well as theory assignments from the Classroom Manual and from the Shop Manual.

Grading Scale

Grades will be assigned for performance in accordance with the policy outlined in the college catalog. The final grade is based the total number of points received in several areas. The final grade will be computed as percentage of total possible points listed in Canvas grading

section.

Grading Rubric:

Chapter Assessments 18%

Task Sheets / Work Sheets / Reflection 13%

Formative Exam 17%

Summative Exam 22%

Shop / Lab / Live work 30%

How to Navigate to Canvas

Institutional Policies

As members of our academic community, we would like to invite you to review the Institutional Syllabus which covers important policies and procedures. This document contains important links for students on the code of student rights and responsibilities, academic integrity, and grading policies, Title IX and other important acknowledgements. By familiarizing yourself with this information, you can help us create a safe and respectful environment for everyone.

You can access the document by clicking on the following link:

<https://slcc.instructure.com/courses/530981/pages/institutional-syllabus>

Learning Support and Tutoring Services

We are pleased to offer a range of tutoring and learning support services to help you achieve your academic goals. Whether you need assistance with a specific subject or want to improve your study skills, you have many options for tutoring or other support.

To learn more about the services we offer and how to access them, please visit the Institutional Syllabus under the Tutoring and Learning Support tab: <https://slcc.instructure.com/courses/530981/pages/institutional-syllabus>. We encourage you to take advantage of these resources to help you succeed in your studies. If you have any questions or would like to schedule a tutoring session, please don't hesitate to reach out to us. We are here to support you in any way we can.

Advising and Counseling Support Services

At our institution, we are committed to supporting your academic and personal growth. That's why we offer a range of advising and counseling services to help you navigate the challenges of college life. To learn more about the resources available to you and how to access them, please visit the Institutional Syllabus under the Advising and Counseling Support Services tab: <https://slcc.instructure.com/courses/530981/pages/institutional-syllabus>. Our advising team and the support centers across campus are here to support you in achieving your goals and overcoming any obstacles you may face.

Student Academic Calendar

As students you should be aware of all important dates in the semester, such as the day that courses begin and end, as well as the drop date and the last day to withdraw. To learn more about those dates, navigate to the Student Academic Calendar below:

[SLCC Student Academic Calendar](#)