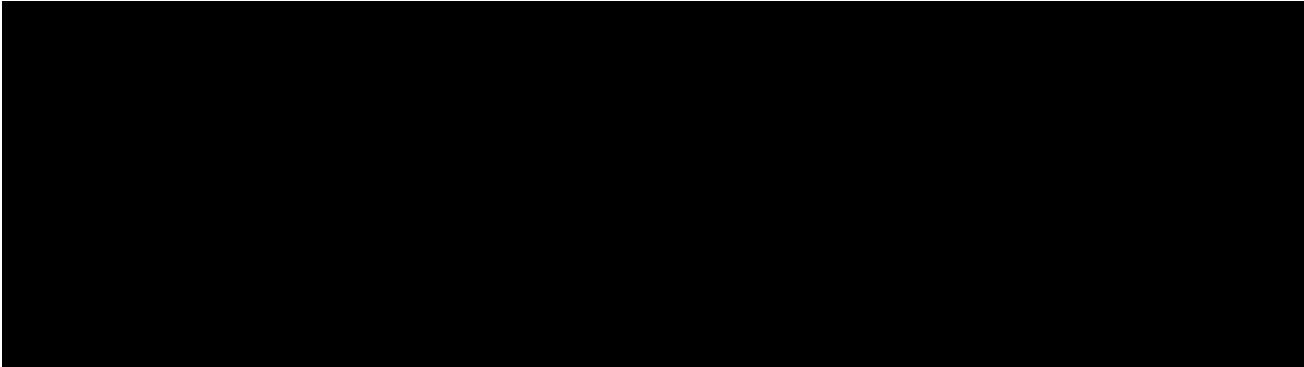


# Heating & Air Conditioning

TEAU1270 251

## Instructor Information

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## Course Description

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This ASE-EF accredited course is a study of the automotive heating, air conditioning and passenger comfort systems. In this lecture/lab course students demonstrate their proficiency in the design, maintenance, diagnosis and repair of modern automotive heating and air conditioning systems and obtain an industry required Environmental Protection Agency (EPA) 609 Certification. It is recommended that students take TEAU 1050, TEAU 1100, TEAU 1150, TEAU 1140, TEAU 1160, TEAU 1210, TEAU 1240, and TEAU 1250 in the same semester as this course.

Prerequisite(s): TEAU 1010 (with concurrency)

Diagnostic, service and repair procedures involved in automotive heating, air conditioning systems.

## Course Student Learning Outcomes

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- Demonstrate proficiency in Automotive Service Excellence-Education Foundation (ASE-EF) Master Automotive Service Technology (MAST) Tasks in accordance with industry standards.
- General: A/C System Diagnosis and Repair.

- Refrigeration System Component Diagnosis and Repair.
- Heating, Ventilation, and Engine Cooling Systems Diagnosis and Repair.
- Operating Systems and Related Controls Diagnosis and Repair.
- Refrigerant Recovery, Recycling, and Handling.

## Course Prerequisites

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1. AUTO 1010, 1150, 1100, 1140,1150 and 1160 WITH A PASSING GRADE (74% or Greater). Students may be required to present academic transcript to enroll in this course.
2. COMPLETION AND CURRENT SP2 Automotive Service Safety AND Automotive Service Pollution Prevention certification. Fall Registration for 2022 will require Lift It Right Certifications also.

## Communication Plan

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Example language:

- I will respond to email daily. I will offer feedback on major assignments within 48 hrs.. The best way to contact me is via the Canvas Inbox, as I will prioritize this email over other modes of communication.
- In this course I will be posting interactive announcements which will offer specific opportunities for class questions and extra credit every other week.
- Additionally, I will be participating in the discussion forums 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, we'll be holding small group Q & A sessions, 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)

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To prepare the student to succeed in this class: Obtain classroom text, attend Lecture and Lab as scheduled, complete the reading as assigned, take notes and participate in theory discussions, lab demonstrations, CANVAS and lab assignments including live work. Lab assignments are to be completed within specified timeframe listed on CANVAS. Best Advice... Use Your lab time wisely!

## Required Text or Materials

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**Title: Today's Technician: Automotive Heating & Air Conditioning Classroom Manual and Shop Manual**

**ISBN:** 9781305497627

**Authors:** Mark Schnubel

**Publisher:** Delmar, Cengage Learning

**Publication Date:** 2017

**Edition:** 6th

For more information on textbook accessibility, contact Accessibility & Disability Services at [ads@slcc.edu](mailto:ads@slcc.edu).

## Brief Description of Assignments/Exams

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Exams Note: Quizzes or Exams cannot be made up so expect to attend. Quizzes for each section and a final exam are given for Manual Transmissions and Air Conditioning. These tests are closed book unless specified and can include multiple choice, true/false, fill-in the blank and essay type questions. The Course Outline/Assignment Schedule is in Canvas modules and the Canvas calendar. Major Assignments All assignments with due dates are listed in the Canvas modules. They are also listed chronologically in your Canvas calendar. Assignments can be submitted in person (on paper) or submitted electronically in canvas (preferred). The file type must be able to be opened in Canvas. Preparation Read the classroom manual and shop manual chapters indicated in each section. Pay attention during presentations and review additional information provided. Questions included on tests or quizzes are often derived from the additional presented materials. Lab requirements Complete assignments, job sheets/worksheets as shown in the Canvas modules and the Canvas calendar. . Safety glasses and face coverings are required in the shop area. Please always follow safe shop practices. Final grades will be

affected due to safety violations. Attendance and Participation Participation in the classroom is expected and encouraged. 4 absences a student receives no higher than a B grade. (89% attendance) 5 absences a student receives no higher than a C grade. (86% attendance) 6 absences a student receives no higher than a D grade. (83% attendance) 7 absences a student receives a failing E grade. (80% attendance) 3 late arrivals or early exits equals 1 absence. For example: 3 absences and 3 late arrivals would equal no higher than a B grade. Plan to attend all Theory/Lecture and Lab classes. Student Contribution I expect professionalism. Conducting yourself in this manner will put money in your pocket. Team concepts that are commonplace within the industry at dealerships and aftermarket shops are incorporated in this course. Students are expected to track their individual course progress and reflect on course content.

## Assignment Schedule

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Due Date	Assignment Name	Assignment Type	Points
	<a href="#">Acknowledgement of Syllabus</a>	Quiz	1
	<a href="#">Chapter 10</a>	Quiz	20
	<a href="#">Chapter 11</a>	Quiz	20
	<a href="#">Chapter 2</a>	Quiz	20
	<a href="#">Chapter 2 Fill-in the Blank Review</a>	Assignment	10
	<a href="#">Chapter 5</a>	Quiz	20
	<a href="#">Chapter 5 Fill-in the Blank Review</a>	Assignment	10
	<a href="#">Chapter 6</a>	Quiz	20
	<a href="#">Chapter 6 Fill-in the Blank Review</a>	Assignment	10
	<a href="#">Chapter 7</a>	Quiz	20

<b>Due Date</b>	<b>Assignment Name</b>	<b>Assignment Type</b>	<b>Points</b>
	<a href="#">Chapter 7 Fill-in the Blank Review</a>	Assignment	10
	<a href="#">Chapter 8</a>	Quiz	20
	<a href="#">Chapter 8 Fill-in the Blank Review</a>	Assignment	10
	<a href="#">Chapter 9</a>	Quiz	20
	<a href="#">EPA 609 Certification- Online</a>	Assignment	75
	<a href="#">Final Exam</a>	Quiz	200
	<a href="#">Introduce Yourself</a>	Discussion	0
	<a href="#">Job Sheet 1</a>	Assignment	10
	<a href="#">Job Sheet 18</a>	Assignment	10
	<a href="#">Job Sheet 19</a>	Assignment	20
	<a href="#">Live Work</a>	Assignment	137
	<a href="#">Project 1: Basic A/C System Illustration</a>	Assignment	20
	<a href="#">Roll Call Attendance</a>	Assignment	100
	<a href="#">Section 1 Quiz</a>	Quiz	40
	<a href="#">Section 1 Reflection</a>	Assignment	20
	<a href="#">Section 2 Quiz</a>	Quiz	40
	<a href="#">Section 2 Reflection</a>	Assignment	20
	<a href="#">SP2 Certificates</a>	Assignment	20
	<a href="#">Worksheet 1</a>	Assignment	20
	<a href="#">Worksheet 2</a>	Assignment	20

Due Date	Assignment Name	Assignment Type	Points
	<a href="#">Worksheet 3</a>	Assignment	20
	<a href="#">Worksheet 7</a>	Assignment	20
	<a href="#">Worksheet 8</a>	Assignment	20
10/5	<a href="#">Chapter 9 Fill-in the Blank Review</a>	Assignment	10
12/15	<a href="#">Chapter 10 Fill-in the Blank Review</a>	Assignment	10
1/22	<a href="#">ACS 24 Honda Module</a>	Assignment	30
1/22	<a href="#">Chapter 11 Fill-in the Blank Review</a>	Assignment	10
4/17	<a href="#">Course Reflection</a>	Assignment	40

## Grading Scale

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Grades will be assigned for performance in accordance with the policy outlined in the college catalog. The final grade is based upon the total number of points received in several areas as described in detail within the Course Outline/Assignment Schedule. The final grade will be computed using the grading matrix as follows: (lab hours in parenthesis for each section) A 100.0% - 92.5% (13.7-12.7) C- < 72.0% - 70.0% (9.9-9.6) A- < 92.5% - 89.5% (12.6-12.3) D+ < 70.0% - 67.0% (9.5-9.2) B+ < 89.5% - 86.5% (12.2-11.9) D < 67.0% - 63.0% (9.1-8.6) B < 86.5% - 82.5% (11.8-11.3) D- < 63.0% - 60.0% (8.5-8.0) B- < 82.5% - 79.5% (11.2-10.9) E < 60% (7.9-0.0) C+ < 79.5% - 76.5% (10.8-10.5) C < 76.5% - 72.0% (10.4-10.0) Note: The grade C or better is required to pass this course.

## How to Navigate to Canvas

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## Institutional Policies

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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

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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

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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

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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](#)