Refrigeration Applications

TEAC - 1255 401

Course Description

Introduces the application theory in refrigeration systems. Students will learn the properties of refrigerants, and characteristics of different types of refrigeration systems. The proper process of system recovery, evacuation and recharging of refrigerant systems will be covered.

Semester(s) taught: All

Course Student Learning Outcomes

- Identify and explain the components and operation of the air conditioning system.
- Develop and demonstrate the piping skills used in HVAC equipment installations.
- Identify, interpret and demonstrate the different types of equipment and valves used in air conditioning and refrigeration equipment.
- Explain, describe and identify the different types of refrigerants, oils and their properties.
- Develop and demonstrate the proper steps in recovery, evacuation and charging of a HVACR system.

Engagement Plan

We will respond to email within 24 hours The best way to contact us is via the Canvas Inbox, as I will prioritize this email over other modes of communication.

Brief Description of Assignments/Exams

Assignments and quizzes/exams are scheduled in Canvas.

Assignment Schedule

Due Date	Assignment Name	Assignment Type	Points
	Check Your Knowledge: Chapter 17 Review Quiz ***	Quiz	20
	Check Your Knowledge: Chapter 18 Review Quiz ***	Quiz	14
	Check Your Knowledge: Chapter 19 Review Quiz ***	Quiz	15
	Check Your Knowledge: Chapter 20 Review Quiz ***	Quiz	13
	Check Your Knowledge: Chapter 21 Review Quiz ***	Quiz	15
	Check Your Knowledge: Chapter 4 Review Quiz ***	Quiz	16
	Check Your Knowledge: Chapter 5 Review Quiz ***	Quiz	14
	Check Your Knowledge: Chapter 6 Review Quiz ***	Quiz	17
	Check Your Knowledge: Chapter 7 Review Quiz ***	Quiz	15

Due Date	Assignment Name	Assignment Type	Points
	Compressor Applications Written Progress Exam- Requires Respondus LockDown Browser	Quiz	37
	Introduce Yourself	Discussion	0
	Lab Project 17: Working with Metering Devices	Assignment	1
	Lab Project 18: Special Purpose Valves	Assignment	0
	Lab Project 19: Troubleshooting Refrigerant Flow Controls	Assignment	0
	Lab Project 20: Compressors	Assignment	0
	Lab Project 21: Compressor Lubrication and Accessories	Assignment	0
	Lab Project 4: Working with Copper Tubing	Assignment	1
	Lab Project 5: Working with Pipe	Assignment	1
	Lab Project 6: Soldering	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	Lab Project 7: Brazing and Flame Cutting	Assignment	1
	Lab Project Capillary Tube Refrigeration System	Assignment	0
	Lab Project Thermal Expansion Valve Refrigeration System	Assignment	0
	Lab Project: 15% Silver Brazing Training	Assignment	1
	Lab Project: 45% Silver Brazing Training	Assignment	1
	Lab Project: 95/5 Soft Solder Training	Assignment	1
	Lab Project: Bending Tubing	Assignment	1
	Lab Project: Building a Heat Exchanger	Assignment	1
	Lab Project: Checking and Adjusting TXV's	Assignment	1
	Lab Project: Compressor Compression Ratios	Assignment	0
	Lab Project: Flaring Tubing	Assignment	1
	Lab Project: Swaging Tubing	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	Lab Project: Working with Fixed Metering Orifices	Assignment	1
	Metering Devices Lab Practical **	Assignment	27
	Metering Devices Written Progress Exam- Requires Respondus LockDown Browser	Quiz	28
	Piping Skills Lab Practical **	Assignment	16
	Piping Skills Written Progress Exam- Requires Respondus LockDown Browser	Quiz	53
	Refrigeration Applications Final Lab Practical **	Assignment	57
	Refrigeration Applications Written Final Exam Form A- Requires Respondus LockDown Browser	Quiz	51
	Refrigeration System Performance Lab Practical **	Assignment	64
	Special Purpose Valves Lab Practical **	Assignment	19

Due Date	Assignment Name	Assignment Type	Points
	Special-Purpose Valves Written Progress Exam- Requires Respondus LockDown Browser	Quiz	22

Grading Scale

Each assignment, quiz, and exam have an assigned point value. The course grade is determined by summing all of the assignments, quizzes, and exams and dividing the sum by the total possible points. A letter grade of A , B, or E (failing) will be assigned according to the percentage of points earned and the following table:

GRADE	RANGE
A	90-100%
B	80-89%
E	Less than 80%

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.

For more information, navigate to the Institutional Policies tab on the Institutional Syllabus page.

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, visit the Institutional Syllabus page under the Tutoring and Learning Support tab. 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, visit the Institutional Syllabus page under the Advising and Counseling Support Services tab. 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