

Fndmntls of Gas Heat/RMGA prep

TEAC - 1245 401

Course Description

Introduces the theory and applications of combustion heating systems. Students learn principles of natural gas heating systems and associated mechanical codes and safety; includes COSA carbon monoxide protection. Prepares the student to take the Rocky Mountain Gas Association Certification Exam. This certification is required for technicians who work on gas fired equipment in the State of Utah.

Semester(s) taught: All

Course Student Learning Outcomes

- Explain combustion theory and the purpose of a combustion analysis.
- Identify different gas furnace types and explain the sequence of operation.
- Determine the proper sizing of gas piping, flue venting, and combustion air, using international mechanical and gas code books.
- Identify the sources and causes carbon monoxide and how to handle it.
- Explain the functionality of a furnace and its components.
- Troubleshoot and service medium and high efficiency furnaces.
- Analyze furnace efficiency.

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
	Carbon Monoxide Safety Written Progress Exam- Requires Respondus LockDown Browser	Quiz	20
	Chapter 1 Video Assignment	Assignment	10
	Chapter 11 Assignment	Assignment	10
	Chapter 2 Video Assignment	Assignment	10
	Chapter 3 Video Assignment	Assignment	10
	Chapter 4 Video Assignment	Assignment	10
	Chapter 5 Video Assignment	Assignment	10
	Chapter 6 Video Assignment	Assignment	10
	Chapter 7 Video Assignment	Assignment	10
	Chapter 8 Video Assignment	Assignment	10

Due Date	Assignment Name	Assignment Type	Points
	Chapter 9 Video Assignment	Assignment	10
	Check Your Knowledge: Carbon Monoxide Safety Review Quiz ***	Quiz	10
	Check Your Knowledge: Chapter 29 Review Quiz ***	Quiz	15
	Check Your Knowledge: Chapter 30 Review Quiz ***	Quiz	17
	Check Your Knowledge: Combustion ***	Quiz	10
	Combustion Theory Written Progress Exam- Requires Respondus LockDown Browser	Quiz	30
	Final Competency Exam Form A- Requires Respondus LockDown Browser	Quiz	29
	Final RMGA Competency Exam Form A- Requires Respondus LockDown Browser	Quiz	29
	Furnace Components and Functionality Lab Practical **	Assignment	12

Due Date	Assignment Name	Assignment Type	Points
	Furnace Types Lab Practical **	Assignment	30
	Furnace Types Written Progress Exam- Requires Respondus LockDown Browser	Quiz	66
	Gas Heating Lab Practical A **	Assignment	32
	Introduce Yourself	Discussion	0
	Lab Project 30: Gas Heat	Assignment	1
	Lab Project: Checking for Carbon Monoxide	Assignment	1
	Lab Project: Combustion Analysis	Assignment	1
	Lab Project: Furnace Identification	Assignment	1
	Lab Project: Furnace Operational Efficiency	Assignment	1
	Lab Project: Furnace Rebuild and Startup	Assignment	1
	Lab Project: Gas Meter Clocking	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	Lab Project: Honeywell Gas Valve Trainer: Hot Surface and Direct Spark Systems	Assignment	1
	Lab Project: Honeywell Gas Valve Trainer: Intermittent Pilot and Smart Valves	Assignment	1
	Lab Project: Honeywell Gas Valve Trainer: Standing Pilot	Assignment	1
	Lab Project: Ignition Systems, Part 1: Standing Pilots	Assignment	1
	Lab Project: Ignition Systems, Part 2: Intermittent Pilot and Smart Valve	Assignment	1
	Lab Project: Ignition Systems, Part 3: Hot Surface and Direct Spark Systems	Assignment	1
	Lab Project: Measuring Manifold Gas Pressure	Assignment	1

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](#)