



Course Information

Course Title	Gas and Electric Heating
Course Prefix, Num. and Title	HART 1345
Division	Vocational Science
Department	Air Conditioning, Heating, Refrigeration and Electrical Technology
Course Type	WECM Course
Course Catalog Description	Study of the procedures and principles used in servicing heating systems including gas fired furnaces and electric heating systems.
Pre-Requisites	HART 1301 and HART 1307; or Program Director Approval
Co-Requisites	Enter Co-Requisites Here.

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours:	3:1:7
Lab/Other Hours	
Equated Pay Hours	4.5
Lab/Other Hours Breakdown: Lab Hours	7
Lab/Other Hours Breakdown: Clinical Hours	Enter Clinical Hours Here.
Lab/Other Hours Breakdown: Practicum Hours	Enter Practicum Hours Here.
Other Hours Breakdown	List Total Lab/Other Hours Here.

Approval Signatures

Title	Signature	Date
Prepared by:		
Department Head:		
Division Chair:		
Dean/VPI:		
Approved by CIR:		

Additional Course Information

Topical Outline: Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

- Furnaces
- Components
- Troubleshoot
- Safety inspections
- Identify unsafe operations
- Electric heating
- Troubleshooting

Course Learning Outcomes:

Learning Outcomes – Upon successful completion of this course, students will:

1. Identify different types of gas furnaces and describe component operation
2. Troubleshoot and perform safety inspections on gas and electric heaters

Methods of Assessment:

- 1) Quiz, examination questions, and computer simulation
- 2) Quiz, examination questions, and computer simulation

Required text(s), optional text(s) and/or materials to be supplied by the student:

Refrigeration & Air Conditioning Technology Delmar Cengage Learning ISBN 13:978-1-4283-1936-3

Suggested Course Maximum:

30

List any specific or physical requirements beyond a typical classroom required to teach the course.

Fully equipped HVAC and Electrical Lab

Course Requirements/Grading System:

90% to 100%	= A
80% to 89%	= B
70% to 79%	= C
60% to 69%	= D
Below 60%	= F

The semester final grade is based on the percentage basis between daily lab work, daily classroom assignments, and semester final.

Daily lab work counts for 50% of final: Daily Classroom work is 20% of final: End of semester written final and lab final is 30% of final average.

Curriculum Checklist:

- Administrative General Education Course** (from ACGM, but not in WCJC Core) – No additional documents needed.
- Administrative WCJC Core Course.** Attach the Core Curriculum Review Forms
 - Critical Thinking
 - Communication
 - Empirical & Quantitative Skills
 - Teamwork
 - Social Responsibility
 - Personal Responsibility
- WECM Course** -If needed, revise the Program SCANS Matrix and Competencies Checklist