# 7/28/2020

# brcc keystone logo

Baton Rouge Community College

*Academic Affairs Master Syllabus*

Date Approved: 2 August 2020

Term and Year of Implementation: Fall 2020

**Course Title:** Heating Systems

**BRCC Course Rubric:** HACR 2118

**Previous Course Rubric**:

**Lecture Hours per week-Lab Hours per week-Credit Hours**: 6-4-8

**Per semester: Lecture Hours-Lab Hours-Instructional Contact Hours**: 90-60-150

**Louisiana Common Course Number:**

**CIP Code:** 47.0201

**Course Description:** Includes the study of the generation, distribution, detection, and prevention of carbon monoxide; and the principles and practices of oil-fired, gas-fired, and electric heating systems.

**Prerequisites:** HACR 1229, HACR 1234, and HACR 1245, all with grades of C or better

**Co-requisites:** HACR 2124

**Suggested Enrollment Cap:** 20

**Learning Outcomes.** *Upon successful completion of this course, the students will be able to:*

1. Describe the signs and symptoms of carbon monoxide poisoning.

2. Describe the operation and function of oil-fired heating systems.

3. Describe the operation and function of gas-fired heating systems.

4. Describe the operation and function of electric heating systems.

**Assessment Measures.** Assessment of all learning outcomes will be measured using the following methods:

1. Assessment measures may include, but are not limited to, presentations, collaborative projects, in-class activities, field reports, homework, quizzes, and exams.

**Information to be included on the Instructor’s Course Syllabi:**

* ***Disability Statement*:** Baton Rouge Community College seeks to meet the needs of its students in many ways. See the Office of Disability Services to receive suggestions for disability statements that should be included in each syllabus.
* ***Grading:*** The College grading policy should be included in the course syllabus. Any special practices should also go here. This should include the instructor’s and/or the department’s policy for make-up work. For example in a speech course, “Speeches not given on due date will receive no grade higher than a sixty” or “Make-up work will not be accepted after the last day of class”.
* ***Attendance Policy*:** Include the overall attendance policy of the college. Instructors may want to add additional information in individual syllabi to meet the needs of their courses.
* ***General Policies*:** Instructors’ policy on the use of things such as beepers and cell phones and/or hand held programmable calculators should be covered in this section.
* ***Cheating and Plagiarism*:** This must be included in all syllabi and should include the penalties for incidents in a given class. Students should have a clear idea of what constitutes cheating in a given course.
* ***Safety Concerns:*** In some courses, this may be a major issue. For example, “No student will be allowed in the lab without safety glasses”. General statements such as, “Items that may be harmful to one’s self or others should not be brought to class”.
* ***Library/ Learning Resources:*** Since the development of the total person is part of our mission, assignments in the library and/or the Learning Resources Center should be included to assist students in enhancing skills and in using resources. Students should be encouraged to use the library for reading enjoyment as part of lifelong learning.

**Expanded Course Outline:**

A. Carbon Monoxide

1. Carbon Monoxide

2. Combustion

3. Pressure Measurements

B. Oil-Fred Heating Systems

1. Basic Oil Furnace Operation

2. Fuel Oil

3. Combustion Efficiency

4. Fuel Line Components

5. Oil Burners

6. Primary Control Units

7. Oil Furnace Exhaust

8. Oil-Fired Heating System Service

C. Gas-Fired Heating Systems

1. Gas Furnace Operation Overview

2. Combustion

3. Gas Valves

4. Gas Burners

5. Ignition Systems

6. Gas Furnace Controls

7. Gas Furnace Efficiency

8. Gas Furnace Venting Categories

9. Gas-Fired Radiant Heat

10. Gas-Fired Heating System Service

D. Electric Heating Systems

1. Principles of Electric Resistance Heating

2. Electric Heating Elements

3. Electric Heating Systems

4. Electric Furnace and Duct Heater Controls

5. Electric Baseboard Heating Unit Controls

6. Electric Heat Construction Practices

7. Electric Heating System Service