# 7/27/2020

# 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:** Cutting Processes

**BRCC Course Rubric:** WELD 1211

**Previous Course Rubric**: WELD 1210, WELD 1310

**Lecture Hours per week-Lab Hours per week-Credit Hours**: 0-3-1

**Per semester: Lecture Hours-Lab Hours-Instructional Contact Hours**: 0-45-45

**Louisiana Common Course Number:**

**CIP Code:** 48.0508

**Course Description:** Introduces principles of cutting with an Oxyfuel (OFC) apparatus, cylinder and equipment safety, proper handling and setup, including practice cutting mild steel using both the manual and motorized process. Includes the safe operation of Carbon Arc Cutting (CAC) and Plasma Arc Cutting (PAC) equipment, with practice cutting and gouging ferrous and non-ferrous metals. This course requires a lab fee.

**Prerequisites:**  CORE 1003 and WELD 1113

**Co-requisites:** None

**Suggested Enrollment Cap:** 20

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

1. Demonstrate the ability to safely light, adjust, shut-down, and disassemble manual and motorized Oxyfuel cutting equipment.

2. Perform various manual and motorized Oxyfuel cuts (straight line, square shape, piercing, slot, beveling, gouging).

3. Prepare the work area and CAC-A and PAC equipment for safe operation.

4. Demonstrate safe operation of CAC-A and PAC equipment.

5. Apply safe housekeeping practices.

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

1. Assessment measures may include, but are not limited to quizzes, in-class activities, observation, skill performances, class participation, and industry-standard proficiency 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:**

1. Safety and Oxyfuel cutting equipment

2. Oxyfuel equipment set-up

3. Lighting, adjusting, and shutting-down Oxyfuel equipment

4. Disassembling Oxyfuel equipment

5. Oxyfuel cylinders

6. Straight Line and Square Shape cutting

7. Piercing and Slot cutting

8. Bevel cutting

9. Washing and Gouging

10. The Motorized Oxyfuel cutting machine

11. The Air Carbon Arc Cutting (CAC-A) process

12. Installing CAC-A electrodes

13. Safe operation of CAC-A equipment

14. Washing and gouging using CAC-A

15. Proper storage and housekeeping of CAC-A equipment

16. The Plasma Arc Cutting (PAC) process

17. The PAC equipment: Preparation and Set-up

18. Cutting with PAC equipment