# 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:** GTAW (Pipe 26-6G)

**BRCC Course Rubric:** WELD 2116

**Previous Course Rubric**: WELD 2210, WELD 2220, WELD 2221, and WELD 2222

**Lecture Hours per week-Lab Hours per week-Credit Hours**: 1-10-6

**Per semester: Lecture Hours-Lab Hours-Instructional Contact Hours**: 15-150-165

**Louisiana Common Course Number:**

**CIP Code:** 48.0508

**Course Description:** Introduces the principles and safe equipment setup of, and the components and consumables for Gas Tungsten Arc Welding (GTAW). Students will practice welding beads (fillet welds) and groove welds in the flat, horizontal, vertical, and overhead positions using carbon-steel consumables. Covers the 2G vertical fixed, 5G horizontal fixed, and 6G-45o fixed position pipe joints. This course requires a lab fee.

**Prerequisites:**  WELD 1419 and WELD 1519

**Co-requisites:** WELD 2213 and WELD 2313

**Suggested Enrollment Cap:** 20

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

1. Demonstrate the safe operating principles of Gas Tungsten Arc Welding (GTAW).

2. Assemble GTAW equipment.

3. Describe Gas Tungsten Arc Welding (GTAW) open root pipe welds.

4. Perform V-groove pipe welds in the 2G vertical fixed position.

5. Perform welds in the 5G horizontal fixed position.

6. Prepare V-groove pipe welds in the 6G-45o fixed position.

7. 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. Principles of Gas Tungsten Arc Welding (GTAW)

2. Review safe operating principles of Gas Tungsten Arc Welding (GTAW)

3. GTAW equipment

4. Filler metals

5. Shielding Gases

6. GTAW equipment assembly and operation

7. Carbon-steel plates

8. Beads welds

9. Fillet welds

10. Groove welds

11. Weld positions

12. Best Practices in GTAW

13. Open V-Groove welds

14. The GTAW V-groove pipe weld

15. The 2G vertical fixed position

16. The 5G horizontal fixed position

17. The 6G-45o fixed position pipe weld