# 8/13/2020

# brcc keystone logo

Baton Rouge Community College

*Academic Affairs Master Syllabus*

Date Approved: 28 August 2020

Term and Year of Implementation: Fall 2020

**Course Title:** Process Technology I Equipment

**BRCC Course Rubric:** PTEC 1612

**Previous Course Rubric**:

**Lecture Hours per week-Lab Hours per week-Credit Hours**: 2-0-2

**Per semester: Lecture Hours-Lab Hours-Instructional Contact Hours**: 30-0-30

**Louisiana Common Course Number:**

**CIP Code:** 15.0404

**Course Description:** Introduces process plant equipment including their construction, principles of operations, maintenance and utilization within the process industry. Equipment to be studied includes piping, valves, pumps, compressors, heat exchangers, fired furnaces, and steam and gas turbines.

**Prerequisites:** PTEC 1013 (or PTEC 101) and PTEC 2033 (or PTEC 203) with grades of "C" or better

**Co-requisites:** PTEC 1622

**Suggested Enrollment Cap:** 15

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

1. Discuss how various types of major equipment work.

2. Explain how to put equipment into and out of service using established lock out tag out procedures.

3. Describe the environmental, health and safety considerations for common process equipment.

4. Identify the various types of routine maintenance required for common process equipment.

5. Identify the pieces of equipment in process diagrams.

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

1. Assessment measures may include, but are not limited to, essays, presentations, speeches, portfolios, performances, individual and collaborative projects, in-class activities, lab reports, homework, computer-based training (CBTs) modules, quizzes, exams, industry-based standards, and/or simulated training activities.

**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. Introduction to Equipment and Tools
2. Soft Skills (Employability Skills)
3. Piping, Tubing, Hoses and Fittings
4. Valves
5. Pumps
6. Compressors
7. Turbines
8. Motors and Engines
9. Power Transmission and Lubrication
10. Heat Exchangers Furnaces
11. Cooling Towers
12. Furnaces
13. Boilers
14. Filters and Dryers
15. Vessels
16. Process Diagrams