# 11/6/2020

# brcc keystone logo

Baton Rouge Community College

*Academic Affairs Master Syllabus*

Date Approved: 3 September 2020

Term and Year of Implementation: Spring 2021

**Course Title:** Pipe Drafting

**BRCC Course Rubric:** DRFT 1233

**Previous Course Rubric**:

**Lecture Hours per week-Lab Hours per week-Credit Hours**: 1-4-3

**Per semester: Lecture Hours-Lab Hours-Instructional Contact Hours**: 15-60-75

**Louisiana Common Course Number:**

**CIP Code:** 15.1301

**Course Description:** Studies piping design and drafting fundamentals as used in process industries such as refineries and petrochemical plants. Includes the study, use, and drafting of pipes, fittings, flanges, valves, equipment and structural systems using the latest industry-standard software. Students will use industry standards to create schematic, plan, elevation, isometric, spool, and 3-D drawings of various process piping components/systems.

**Prerequisites:**  CORE 1003 and DRFT 1113 and DRFT 1123 and [CSCI 1013 or CSCI 2203]

**Co-requisites:** DRFT 1213 and DRFT 1223 and DRFT 1243

**Suggested Enrollment Cap:** 25

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

1. Identify the materials, computing systems, and equipment necessary for the petrochemical industry.

2. Interpret process piping systems as two-dimensional drawings.

3. Identify the purpose and function of various pipe fittings.

4. Identify basic petroleum refining processes and the equipment needed in refining.

5. Create professional piping plans, equipment drawings, and piping schedules.

**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, individual and collaborative projects, in-class activities, lab reports, homework, 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. Piping Fittings – Types, Sizes, Pressure Ratings, Connections

2. Representing Piping – Single- or Double-Line Representation

3. Flow Diagrams – Functions and Types: Piping and Instrumentation Diagrams (P&IDs), Process Flow Diagrams (PFDs), etc.

4. Major Equipment – Distillation Columns, Heat Exchangers, Pumps, Cracking Towers

5. Schedules and Takeoffs – Piping, Nozzles, Skid, and P&ID

6. Advanced Drafting Techniques – Techniques specific to pipe drafting

7. Structural and Foundational importance