# 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 Troubleshooting

**BRCC Course Rubric:** PTEC 2443

**Previous Course Rubric**: PTEC 244

**Lecture Hours per week-Lab Hours per week-Credit Hours**: 2-2-3

**Per semester: Lecture Hours-Lab Hours-Instructional Contact Hours**: 30-30-60

**Louisiana Common Course Number:**

**CIP Code:** 15.0613

**Course Description:** Applies a six-step troubleshooting method for solving and correcting operation problems. Focuses on malfunctions as opposed to process design or configuration improvements. Uses data from the instrumentation to determine the cause for the abnormal conditions in an organized and regimented way. Lab fee required.

**Prerequisites:** [PTEC 2073 (or PTEC 207)] and [PTEC 2423 (or PTEC 242)] and [PTEC 2421] and [PTEC 2633 (or PTEC 263)] with grades of "C" or better

**Co-requisites:** None

**Suggested Enrollment Cap:** 20

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

1. Discuss how equipment and/or instrument malfunctions may affect a system.

2. Discuss the domino effect between inter-related systems (how a malfunction in one system effects another system).

3. Demonstrate the ability to identify a problem through monitoring instruments and equipment (collecting data) and communicate effectively.

4. Demonstrate the ability to use troubleshooting steps and tools to identify the most likely cause(s) and take corrective actions(s).

5. Demonstrate the ability to utilize troubleshooting tools and steps to identify most likely cause(s) and take corrective action(s), given a scenario (on paper, simulator, trainer, etc.) with a problem.

**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. Course Overview & Introduction
2. Soft Skills (Employability Skills)
3. Troubleshooting Method and Tools
4. Review of Process Variables, & Instrument Components
5. Simple Separator System: Decanter Principles & Primary Factors
6. Simple Separator System: Decanter Description, Function & Control Theory
7. Reaction System: Process Review & Primary Factors
8. Reaction System: Description, Function, & Control Theory
9. Steam Generation System: Process Review & Primary Factors
10. Steam Generation System: Description, Function, & Control Theory
11. Distillation System: Process Review & Primary Functions
12. Distillation System: Description, Function, & Control Theory
13. Absorption & Stripping System: Process Review & Primary Factors
14. Absorption & Stripping System: Description, Function, & Control Theory