# 8/11/2020

# brcc keystone logo

Baton Rouge Community College

*Academic Affairs Master Syllabus*

Date Approved: 1 September 2020

Term and Year of Implementation: Fall 2020

**Course Title:** Statics and Strengths of Materials

**BRCC Course Rubric:** CMGT 2303

**Previous Course Rubric**: CMGT 230

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

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

**Louisiana Common Course Number:**

**CIP Code:** 52.2001

**Course Description:** Covers building design theory and materials selection.

**Prerequisites:** MATH 1113 (or MATH 101) or MATH 1213 (or MATH 110), MATH 1223 (MATH 111), CMGT 1103 (or CMGT 110), and CMGT 1213 (or CMGT 121), all with grades of “C” or better

**Co-requisites:** None

**Suggested Enrollment Cap:** 30

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

1. Explain forces and loads.

2. Apply basic structural design principles.

3. Calculate stresses on structural members.

4. Compare materials for structural design.

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

1. Assignments, quizzes, and exams

2. A departmental designed estimating project will be utilized to assess learning outcomes.

**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:**

I. Introduction

II. Numerical Accuracy and Dimensional Analysis

III. Forces and Force Systems

IV. The Principle of Moment

V. Forces and Load Paths

VI. Diagrams and Supports

VII. Trusses and Frames

VIII. Friction, Center of Gravity, Stress and Strain

IX. Wood, Steel, and Concrete Materials

X. Beam Design and Behavior

XI. Column Design and Behavior

XII. Connection Design Basics