# 11/26/2022

# brcc keystone logo

Baton Rouge Community College

*Academic Affairs Master Syllabus*

Date Approved: 2 February 2023

Term and Year of Implementation: Spring 2023

**Course Title:** Introduction to Engineering

**BRCC Course Rubric:** ENGR 1052

**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:** 14.0102

**Course Description:** Introduces students to the history of engineering, engineering disciplines and principles of design. The course allows students to get an overview of engineering from the beginning of their study and to become broadly educated across various engineering disciplines while learning how to solve engineering problems. Professional issues such as licensure, ethics, safety, and design are discussed. Projects and activities are used to develop problem solving, written and verbal communication and computer skills (word-processing, spreadsheets, presentations, mathematical analysis, email, Internet).

**Prerequisites:** MATH 1113 (or MATH 101) or MATH 1213 (or MATH 110) with a grade 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. Recognize the nature of engineers and the engineering profession.

2. Create an academic plan for reaching career goals in engineering, including baccalaureate degree completion.

3. Describe educational requirements and skills, ethical expectations, financial rewards, and personal satisfaction of various career choices in engineering.

4. Describe engineering problem-solving methodology.

5. Communicate, verbally, technical and non-technical information in an organized, coherent narrative.

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

1. Students will maintain a notebook containing their assignments.

2. Assignments may include but not limited to, an academic plan, career plan, written assignments, oral reports, a design project, professional development entries, quizzes and exams

3. A pre- and post- survey assessing personal growth resulting from participation in the course.

**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. History of Engineering

II. Engineering Essentials

A. Everyday Engineering

B. Professional licensure

C. Ethics

D. Design and Teamwork

E. Engineering Communication

F. Estimation

III. Engineering Disciplines

A. Biological Engineering

B. Civil Engineering

C. Environmental Engineering

D. Chemical Engineering

E. Computer and Electrical Engineering

F. Industrial Engineering

G. Mechanical Engineering

H. Petroleum Engineering

IV. Computer Literacy

A. Word Processing Software

B. Spreadsheet Software

C. Presentation Software

D. Email

E. Internet