# 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:** Machine Design Drafting

**BRCC Course Rubric:** DRFT 1243

**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:** Introduces feature-based parametric modeling of simple and complex machine parts, sub-assemblies, and assemblies. Includes fully documenting design projects according to industry standards, including video presentations, animations, project documentation, change orders, file management for design projects, reverse engineering and 3D printing.

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

**Co-requisites:** DRFT 1213 and DRFT 1223 and DRFT 1233

**Suggested Enrollment Cap:** 25

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

1. Explain the basic concepts used to create parametric solid models.

2. Utilize two-dimensional (2D) sketching in the solid modeling process.

3. Edit an existing solid model utilizing feature modification.

4. Create various views using a parametric modeling software.

5. Develop an animated assembly drawing.

**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. Sketching Three-Dimensional (3D)\_ Parts

2. Complex Shapes Using Two-Dimensional (2D) Sketching Tools

3. Features & Patterns

4. Drawings & Drawing Formats

5. 3D Assemblies

6. Engineering Analysis

7. Motion Analysis

8. Collision and Contact/Stress Analysis

9. Animations