Bossier Parish Community College
Master Syllabus

Course Prefix and Number: ENGR 101 **Credit Hours:** 3-3-0

Course Title: Engineering Fundamentals II

Course Prerequisite: ENGR 100

Textbook: Barr, Davor, Juricic, Kreger. Engineering & Computer Graphics Workbook Using SOLIDWORKS 2018, SDC Publications. ISBN: 9781630571429

Course Description: ENGR 101 focuses on model, design and integrate machine and electronic elements such as sensors, motors, gears and machined parts. Modeling and analysis of the product include principles such as computer simulation, fluid mechanics and structural analysis. These principles are introduced through hands-on design projects of a system that is relevant to a real world application. Various tools such as Arduino programming, Solidworks and Matlab are utilized to facilitate the designing.

Learning Outcomes:
At the end of this course, the student will

A. Design an engineering product.
B. Demonstrate skills in setting up and solving problems.
C. Demonstrate research or/and design skills in an engineering related topic;
D. Demonstrate ability to organize and communicate technical and non-technical information orally.

To achieve the learning outcomes, the student will or will be able to:
(The letter designations at the end of each statement refer to the learning outcome(s).)

1. Implement engineering design process and basic fabrication techniques. (A, B, C)
2. Apply knowledge of mathematics, science, and engineering to analyze and solve problems. (A, B, C)
3. Analyze and interpret data for science and engineering applications. (A, B, C)
4. Design, organize, give, and evaluate oral communications. (A, B, C, D)

Course Requirements: (in addition to requirements for face-to-face courses, additional requirements for online and/or hybrid courses should be included, if applicable)

1. Complete assigned homework and in-class exercises in problem solving and analysis.
2. Complete three exams.
3. Complete a peer-reviewed oral presentation within time limits and design criteria.

Course Grading Scale:

90 – 100 = A
80 – 89 = B

70 – 79 = C
60 – 69 = D
0 – 59 = F

Attendance Policy: The college attendance policy is available at http://www.bpcc.edu/catalog/current/academicpolicies.html

Course Fees: This course is accompanied with an additional non-refundable fee for supplemental materials, laboratory supplies, software licenses, certification exams and/or clinical fees.

Nondiscrimination Statement: Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

Title VI, Section 504, and ADA Information
Angie Cao, Student and Disabilities Services Specialist
Student Services, F-254
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Phone: 318-678-6511
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Equity/Compliance Coordinator
Teri Bashara, Director of Human Resources
Human Resources Office, A-105
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Bossier City, LA 71111
Phone: 318-678-6056
Hours: 8:00 a.m.-4:30 p.m. Monday - Friday, excluding holidays and weekends.