

Bossier Parish Community College
Master Syllabus

Course Prefix and Number: ENGR 222

Credit Hours: 3-3-0

Course Title: Thermodynamics

Course Prerequisite: ENGR 100 and MATH 113

Textbook(s) (when applicable): Boles, Cengel. Thermodynamics: An Engineering Approach, 7th edition. McGraw-Hill. ISBN: 9780077366742

Course Description: Fundamental concepts, properties of pure substance, work, heat, first and second laws of thermodynamics, entropy, cycle analysis.

Learning Outcomes:

At the end of this course, the student will:

- A. demonstrate an understanding and skills in the use of basic concepts and principles of thermodynamics;
- B. demonstrate knowledge of math, science, and engineering to analyze and design thermal systems; and
- C. demonstrate an ability to identify, formulate, and solve engineering problems.

To achieve the learning outcomes, the students will or will be able to:

(The letter designations at the end of each statement refer to the learning outcome(s).)

1. understand and describe the fundamentals and basic concepts of thermodynamics; (A, B, C)
2. apply the First and Second Laws of thermodynamics to design and analysis thermal systems; (A, B, C) and
3. analyze, formulate solutions, and solve problems associated with thermal systems. (A, B, C)

Course Requirements:

1. Complete assigned homework and in-class exercises in problem solving and analysis.
2. Complete three unit exams and final exam.

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://catalog.bpcc.edu/content.php?catoid=5&navoid=369>

Course Fees: N/A

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.

COORDINATOR FOR SECTION 504 AND ADA

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