

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 250

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://www.bpcc.edu/catalog/current/academicpolicies.html>

Course Fees: N/A

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COORDINATOR FOR SECTION 504 AND ADA

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