

- Course Number and Title: ME 240. Thermodynamics
- Catalog Description: First and second laws of thermodynamics, irreversibility and availability, applications to pure substances and ideal gases.
- Credit Hours: 3 Credits (3)
- Prerequisite(s) / Corequisite(s): Prerequisite(s): PHYS 1310G
Corequisite(s): None
- Required: Required for BSME and BSAE Degrees
- Course Availability: Fall and Spring Semesters (+ Summer)
- Instructor (Usual): Dr. Sarada Kuravi (See <https://mae.nmsu.edu/people/faculty.html>)
- Textbook: Cengel, Y., Boles, M., and Kanoglu, M., *Thermodynamics: An Engineering Approach*, 10th Ed., McGraw-Hill (ISBN-10: 1266664483 or ISBN-13: 9781266664489)
- Course Learning Objectives: After completing this course, a student should be able to:
 - 1) Apply 1st law of thermodynamics to energy systems.
 - 2) Understand and apply thermodynamic concepts and properties to analyze systems with pure substances and ideal gases.
- Topics Covered:
 - Introduction and basic concepts
 - Energy, energy transfer and analysis
 - 1st law of thermodynamics
 - Thermodynamic properties of pure substances and ideal gases
 - Energy analysis of closed and open systems
 - 2nd law of thermodynamics
 - Introduction to entropy and exergy