

## ME 232 – Thermodynamics (1)

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**Hour:** Lecture: 2 Hrs.

Tutorial: 2 Hrs.

Credit: 3.

**Coordinator:** Sameh Shabaan

**Text Book:**

- T.D. Eastop “Applied Thermodynamics for Engineering Technologists“, Longman, Latest Edition.

**Specific course information**

- a. Air standard cycles, steam cycles, combustion. Exhaust gas analysis. Heat transfer by conduction, convection and radiation. Single and multistage compressors. Introduction to refrigeration. Laboratory work
- b. Prerequisite: (BA114) Physics II
- c. Designation: Required

**Specific goals for the course:**

- An ability to apply knowledge of mathematics, science, and engineering.
- Design and conduct experiments, and collect, analyze and interpret data.
- Identify, formulate, and solve engineering problems. Make appropriate and necessary assumptions. Suggest and evaluate new approaches.

**Course instruction outcomes:**

- The students will have familiar grounding in the subject of thermodynamics and the design of thermal plant.

**Student outcomes:**

A, B, E

**Topics Covered:**

- Heat Engine Cycles
- Heat Engine Cycles
- Steam Plant
- Heat Transfer
- Combustion
- Combustion - Practical Analysis of Combustion Products
- Positive Displacement Machine

Course / credit hours	Math & Basic Sciences	Engineering Topics	General Education
Thermodynamics (1) (ME232)/3	1	2	