

**Faculty of Engineering & Technology**

**Engineering Thermodynamics**

**Information :**

**Course Code :** MEC240

**Level :** Undergraduate

**Course Hours :** 3.00- Hours

**Department :** Mechatronics Engineering

**Instructor Information :**

<b>Title</b>	<b>Name</b>	<b>Office hours</b>
Professor	Mahmoud Abdelrasheed Nosier Touny	1
Assistant Lecturer	Moustafa Raafat Aziz Shousha	

**Description :**

Introduction, Fields of application, Fundamental concepts and definitions, Thermo-dynamics Systems; System Classification, Properties and State Processes and Cycles, Properties of a Pure substance; Vapor - Liquid - Solid - Phases of Pure substance, Ideal gas relations, Work and Heat; definitions, kinds of work, heat transfer modes, The first law of thermodynamics; closed system analysis, Control volume analysis and applications, Transient process analysis, The second law of Thermodynamics; Heat Engines and Refrigerators, Carnot cycle, Reversed Carnot cycle, Entropy, Irreversibility and availability, Mixtures of gases.