

## ME 481 – Automotive Technology

---

**Hour:** Lecture: 2 Hrs.

Tutorial: 2 Hrs.

Credit: 3.

**Coordinator:** Salem Haggag

**Text Book:**

- Lecture notes.

**Reference Books:**

- Martin W. Stockel, "Auto Mechanics Fundamentals"
- Julian Happian Smith, "An Introduction to Modern Vehicle Design".
- William k. Toboldt & Larry Johnson "Automotive Encyclopedia"

**Specific course information**

- a. Engine construction, engine systems, exhaust and emission control systems, suspension and steering systems, brakes, clutches, transmission systems, tires, heating and air conditioning systems, safety systems.
- b. Prerequisite: ME 381.
- c. Designation: Selected Elective

**Specific goals for the course:**

- An understanding of professional and ethical responsibility
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- Ability to visualize the impact of the mechanical technological development on the environment.

**Course instruction outcomes:**

- The students will be able to understand professional and ethical responsibilities. Demonstrate ethical practice.
- The students will be able to Understand global effects of practices, products, and events, and the impact of engineering solutions on society
- The students will be able to visualize the impact of the Mechanical technological development on the environment

**Topics Covered:**

- Introduction, history of automotive industry, automotive tools & measuring instruments
- Engine construction
- Engine lubrication
- Engine cooling systems

- Engine fuel systems
- Engine electrical systems
- Engine ignition systems
- Exhaust and emission control systems
- Suspension and steering systems
- Automotive brakes
- Clutches
- Transmission systems
- Tires
- Heating and air conditioning systems
- Safety systems

Course / credit hours	Math & Basic Sciences	Engineering Topics	General Education
Automotive technology (ME481)/3		3	