

Mechanical Engineering

Time	Monday	Tuesday	Wednesday	Thursday	Friday
7:00 AM					
7:30 AM					
8:00 AM					
8:30 AM		MME 4423 SEB 2094	MME 4423 SEB 2094		
9:00 AM					
9:30 AM					MME 4452 SEB 1200
10:00 AM			MME 4452 SEB 1200		
10:30 AM					
11:00 AM					
11:30 AM	MME 3334 UCC 37	MME 3334 SEB 2099			
12:00 PM					
12:30 PM					MME 3334 SEB 2099
1:00 PM					
1:30 PM				MME 3360 SEB 2202	MME 3380 UCC 66
2:00 PM					
2:30 PM	MME 3360 SEB 2202	MME 3380 SEB 2099			
3:00 PM					
3:30 PM	MME 4423 SEB 2094		MME 3360 SEB 2100		
4:00 PM			MME 3380 UCC 66		
4:30 PM					
5:00 PM					
5:30 PM					

MME 4423 - Internal Combustion Engines

This course elaborates on the fundamentals of how the design and operation of internal combustion engines affect their performance, operation, fuel requirements and environmental impact, study of fluid flow, thermodynamics, combustion, heat transfer and friction phenomena, and fuel properties, relevant to engine power, efficiency and emissions, examination of design features and operating characteristics of different types of internal combustion engines: spark-ignition, diesel, stratified-charge, and mixed-cycle engines.

MME 3334 - Thermodynamics II

This course emphasizes the application of thermodynamic principles to engineering systems and problem solving. Topics covered include: sonic velocity and compressible flow through nozzles, reciprocating and rotary compressors, availability and irreversibility in systems and processes, cycles, psychometry of air conditioning, thermodynamic relations and the generalized compressibility charts, chemical reactions and equilibrium.

MME 3360 - Finite Element Methods for Mechanical Engineers

Linear finite element analysis using the direct equilibrium method and the principle of minimum potential energy. Focus on structural mechanics using spring and bar elements (including two-dimensional trusses), beam elements, two-dimensional plane stress/strain elements, axisymmetric elements, and isoparametric formulation. Concepts of heat transfer, fluid flow, and thermal stress also introduced.

MME 4452 - Robotics and Manufacturing Automation

An overview of robotics and manufacturing automation technology and principles. Topics include: automatic production and assembly, sensors, actuators and drives, mechanization of part handling, industrial robots, and machine vision systems. Emphasis will be on the planning, design and implementation of automation systems. PLCs will be used in the lab section.

MME 3380 - Mechanical Components Design

The objective of this course is to consider the stress analysis and design of various components of a machine, e.g. an automobile.