

EEE190 ENGINEERING MECHANICS

SELECTED TOPICS OF MATHEMATICS

Algebra
Analytic Geometry
Trigonometry
Derivatives
Integrals

PRINCIPLES OF MECHANICS

Mechanics
Basic Concepts
Scalars and Vectors
Newton's Laws
Units
Law of Gravitation

VECTOR QUANTITIES

Vector Operations

FORCE SYSTEMS

Force
Moment
Couple

EQUILIBRIUM

Mechanical System Isolation
Equilibrium Conditions

STRUCTURES

Trusses

DISTRUBUTED FORCES

Flexible Cables
Fluid Statics

FRICITION

Flexible Belts

VIRTUAL WORKS

Work
Potential Energy and Stability

INTRODUCTION TO DYNAMICS

Basic Concepts

KINEMATICS OF PARTICLES

Newton's Second Law
Work and Kinetic Energy
Potential Energy

DYNAMICS OF PARTICLES

Rotation
Relative Velocity

VIBRATION AND TIME RESPONSES

Free Vibration of Particles
Forced Vibration of Particles
Vibration of Rigid Bodies
Energy Methods

Text Book and References:

- 1- J.L. MERIAM&L.G KRAIGE Engineering Mechanics (STATIC) John Wiley and Sons Inc.
- 2- J.L. MERIAM&L.G KRAIGE Engineering Mechanics (DYNAMICS) John Wiley and Sons Inc.

Objective of the Course:

Students will learn basic concepts of Mechanics

Grading:

Midterm 1	30%
Midterm 2	30%
Final	40%

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Office Hour : Monday 16:10-16:50

Friday : 16:20-17:00