

Department of Mechanical Engineering			
Engineering Mechanics (67219)			
Total Credits	3		
major compulsory			
Prerequisites	P1 : Calculus II (21102) P2 : General Physics II (22102)		
Course Contents			
This course introduce the students to the fundamental concepts of vectors, equilibrium of force system ,cables, rigid bodies, stress and strain axial and torsional stresses, equations of motion, work and energy impulse and momentum, Eigenfrequencies and eigenmodes of torsional systems.			
Intended Learning Outcomes (ILO's)		Student Outcomes (SO's)	Contribution
1	Illustrate the basic principles of static equilibrium of rigid bodies subjected to force systems and clarify the location of the centroid and moment of inertia of simple and composite area.	A	40 %
2	Demonstrate the forces and the geometry of cables supporting a load.	A	10 %
3	Identify stresses, strains and deformations of rods and shafts subjected to axial and torsional load	E	35 %
4	Clarify the main characteristics of the vibrations of torsional systems.	E	15 %
Textbook and/ or References			
1. J. L. Meriam and L. G. Kraige R. Engineering Mechanics Statics, 5th edition, Wiley,2002. 2. R.C. Hibbeler, Mechanics of Materials, 7th Edition, Prentice Hall, 2008 3. S. S. Rao, Mechanical Vibrations, 4th edition, Pearson, 2004			
Assessment Criteria		Percent (%)	
First Exam		20 %	
Second Exam		20 %	
Quizzes		10 %	
Final Exam		50 %	
Course Plan			
Week	Topic		