



AL IMAM MOHAMMAD IBN SAUD ISLAMIC UNIVERSITY  
COLLEGE OF ENGINEERING  
Department of Civil Engineering

### Course Information

Course Code and Name:	GE202 Dynamics
Credit Hours:	3 (3 Lecture + 1 Tutorial)
Prerequisites:	GE201 Statics

### Course Description

Kinematics and kinetics of particles including Newton's second law, energy-work principles, and impulse-momentum methods. Planar kinematics and planar kinetics of rigid bodies: translation, rotation about a fixed axis, and general plane motion. Introduction to three dimensional dynamics of rigid bodies.

### Textbook

Title	Mechanics for Engineers: Dynamics		
Authors	R.C. Hibbler and K.B. Yap		
Publisher	Pearson-Prentice Hall	Year and Edition	2013, 13th Edition

### Course Contents

1. Kinematics of a Particle
2. Kinetics of a Particle: Force and Acceleration; Work and Energy
3. Kinetics of a Particle: Impulse and Momentum
4. Planar Kinematics of a Rigid Body
5. Planar Kinetics of a Rigid Body: Force and Acceleration; Work and Energy; Impulse and Momentum
6. Three-Dimensional Kinematics of a Rigid Body
7. Three-Dimensional Kinetics of a Rigid Body

Academic Coordinator	Signature
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