BA142 Engineering mechanics II

C O U R S E I N F O R M A T I O N

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Lab.	
BA141	1	2	2	2		3

C O U R S E A I M

The course objectives are to study the geometry of motion (Kinematics) as well as the relationship between the motion of a body and the forces and moments acting on it (Kinetics).

C O U R S E W E E K L Y C O N T E N T S

1 Kinematics of a particle – Rectilinear Kinematics.
2 Curvilinear motion : Rectangular components, projectile motion.
3 Force and acceleration (Kinetics), Newton's laws.
4 Work and energy of a particle (kinetics)
5 Rotation of a rigid body about a fixed axis.
6 General plane motion.
7 Midterm Exam
8 General plane motion: Relative motion- velocity.
9 General plane motion: Relative motion- acceleration
10 Planar Kinetics of a rigid body: Equation of translational motion
11 Planar Kinetics of a rigid body: Equation of rotational motion.
12 12th Assessment
13 Planar Kinetics of a rigid body: Equation of General plane motion
14 Work and Energy
15 Review

S T U D E N T G R A D I N G & A S S E S S M E N T

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	20 Midterm	← 10 MARKS To be freely distributed among possible assessments				→	30
8 to 12	←		20 MARKS			→	20
13 to 15	←		10 MARKS			→	10
16 or 17	40 Final						40
Total	Exams	Assign.	Quizzes	Reports	Present.	Lab.	100

R E F E R E N C E S

Textbook R.C. Hibbeler " Mechanics for Engineers: Dynamics " 13th. edition, Pearson, 2013.
Other