



Jordan University of Science and Technology
Faculty of Engineering
Aeronautical Engineering Department

Course name and number:

AE212 Dynamics

Credit, contact hours and categorization:

Credit and contact hours	Contact hours	Categorization
3 Credit Hours	Sunday-Tuesday-Thursday: 1-hour lecture Monday-Wednesday 1.5-hours lecture	Engineering Topic

Instructor's or course coordinator's name:

Name	Dr. Ahmad Alshyyab
Office location	N1-L2
Email address	asalshyyab@just.edu.jo

Textbook and other supplemental materials:

Textbook			
Title	Engineering Mechanics (Dynamics)		
Author(s)	R. C. Hibbeler		
Edition	13th Edition		
Other Information	Pearson Education, Inc.		
References			
Book Name	Author(s)	Edition	Other Information
Vector Mechanics for Engineers: Dynamics	Beer, Johnston & Clausen	7th Edition	

Course information:

Course Catalogue		
3 Credit Hours. Dynamics of particles, two- and three-dimensional dynamics of rigid bodies, moment of inertia, work and energy, impulse and momentum for rigid bodies.		
Course type: This course is required to fulfill the program.		
Prerequisites or co-requisites		
Line Number	Course Name	Prerequisite Type
252112	ME211B Statics	Prerequisite / Pass



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Specific goals of the course :

Specific outcomes of instruction and the student outcomes (SO) mapping		
Outcomes	SO Mapping	Course Outcome Weight (Out of 100%)
Learn fundamental principles, generalizations, and theories to improve students thinking and problem solving. [50SO1]	50SO1	50%
Develop students ability to solve planar Kinematics and Dynamics of Particles and rigid bodies.	50SO1	50%

Brief list of topics to be covered:

Tentative List of Topics Covered		
Weeks	Topic	References
Weeks 1, 2, 3	Kinematics of a Particles	Chapter 12 From Textbook
Weeks 3, 4, 5	Kinetics of Particles: Force and Acceleration	Chapter 13 From Textbook
Weeks 7, 8, 9	Kinetics of Particles: Work and Energy	Chapter 14 From Textbook
Weeks 10, 11, 12	Kinetics of Particles: Impulse and Momentum	Chapter 15 From Textbook
Weeks 13, 14	Planer Kinematics of Rigid Body	Chapter 16 From Textbook
Weeks 14, 15	Planer Kinetics of Rigid Body: Force and Acceleration	Chapter 17 From Textbook
	Planer Kinetics of Rigid Body: Work and Energy	Chapter 18 From Textbook