

Course Title	()	()	Dynamics
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() Lecturer	()	/ / (Course No. /)	004642/ /3
(/HP) Contact No.		/ (Class Hour/Venue)	/ , 09:00-10:30, 106
(Course Prerequisite)		(Target Student)	2
E-mail (E-mail Address)		/Office Hour (Office/Office Hour)	/ 16:30-18:00, 1114

(Objectives)	Newton (Kinematics) , (kinetics) 가 , 가 , 가
CQI (Continuous Quality Improvement Plan)	
(Text book & References)	: R. C. Hibbeler, "Engineering Mechanics: Dynamics", 13th edition in SI Units, Pearson and Prentice Hall : Ferdinand P. Beer, Russell Johnston Jr., William E. Clausen, "Vector Mechanics for Engineers: Dynamics", Seventh Ed. in SI Units, McGraw Hill
(Assignment book)	R. C. Hibbeler, "Engineering Mechanics: Dynamics", 11th edition in SI Units, Pearson and Prentice Hall
(Lecture Methods)	
(Assignment)	가 , 1
(Reading Materials)	
가 (Course Grading)	[가] (%) : 40, (%) : 40, 가 (%) : 10, (%) : 10, (40 %), (40 %), (10 %), (10 %) 10 --> FA, 2 = 1
(Etc.)	

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(Week)	(Course Contents)	(Etc.)	
1	Introduction to Dynamics Kinematics of a Particles (position, velocity, acceleration) Kinematics of a Particles (position, velocity, acceleration) Introduction to Dynamics Kinematics of a Particles (position, velocity, acceleration)	ppt	
2	Kinematics of a Particles (curvilinear motion) Kinematics of a Particles (curvilinear motion: normal & tangent components)	ppt	HW#1
3	Kinematics of a Particles (curvilinear motion: cylindrical components) Kinematics of a Particles (dependent motion, relative motion analysis) Kinetics of a Particles : Force and Acceleration (Newton's Law, E.O.M.)	ppt	
4	Kinetics of a Particles : Force and Acceleration (EOM in rectangular, normal-tangent, cylindrical coordinates) Kinetics of a Particles : Work and Energy (work of a force, spring, weight)	ppt	HW#2
5	Kinetics of a Particles : Work and Energy (principle of work and energy) Kinetics of a Particles : Work and Energy (principle of work and energy for a system of particles, Power & efficiency)	ppt	
6	Kinetics of a Particles : Work and Energy (conservative force & potential energy, conservation of energy) Kinetics of a Particles : Impulse and Momentum (principle of linear impulse and momentum for a particle and a system of particles)	ppt	HW#3
7	Kinetics of a Particles : Impulse and Momentum (conservation of linear momentum) Kinetics of a Particles : Impulse and Momentum (Impact)	ppt	HW#4
8	Review	ppt	

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(Week)	(Course Contents)	(Etc.)	
9	Planar Kinematics of a Rigid Body (angular momentum, angular impulse and momentum principles, conservation of angular momentum) Planar Kinematics of a Rigid Body (rigid body motion: translation, rotation about a fixed axis)	ppt	
10	Planar Kinematics of a Rigid Body (relative motion analysis: velocity) Planar Kinematics of a Rigid Body (Instantaneous center of zero velocity, relative motion analysis: acceleration)	ppt	HW#5
11	Planar Kinematics of a Rigid Body (relative motion analysis using rotating axis) Planar Kinetics of a Rigid Body :Force and Acceleration (moment of inertia)	ppt	
12	Planar Kinetics of a Rigid Body :Force and Acceleration (planar kinetic equations of motion) Planar Kinetics of a Rigid Body :Force and Acceleration (planar kinetic equations of motion, EOM: general plane motion)	ppt	HW#6
13	Planar Kinetics of a Rigid Body :Force and Acceleration (EOM: general plane motion) Planar Kinetics of a Rigid Body :Force and Acceleration (EOM: general plane motion)	ppt	
14	Planar Kinetics of a Rigid Body :Work and Energy (Kinetic energy, work of a force) Planar Kinetics of a Rigid Body :Work and Energy (principle of work and energy, conservation of energy)	ppt	HW#7
15	Planar Kinetics of a Rigid Body :Impulse and Momentum (linear and angular momentum, principle of impulse and momentum) Planar Kinetics of a Rigid Body :Impulse and Momentum (conservation of momentum, eccentric impact)	ppt	HW#8
16	Review		

