

| | | | |
|--------------|-----|-----|----------|
| Course Title | () | () | Dynamics |
|--------------|-----|-----|----------|

| | | | |
|----------------------------|-----|--------------------------------------|---------------------|
| () Lecturer | () | / / (Course No. /) | 004642/ /3 |
| (/HP) Contact No. | | / (Class Hour/Venue) | |
| (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", 11th 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.) | |

(:)

| (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 | |

(:)

| (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 | | |

