강좌명	역학	교강사명	이석준		
이수구분	전공필수	학점	3		
주교재	서명	저자명	출판사	출판년도	비고
	Analytical Mechanics	G.R. Fowles & G.L. Cassiday	Thomson Prss Brooks/Cole	2005	
수업개요	Using vector and differential equation, we study systematic approach of Newtonian mechanics for the motion of particles				

차시	주차명	주차 강의별 설명	키워드
1	Introduction	Introdution to Mechanics	Physics Theories, Dimension, Unit
2	Vector Analysis 1	Vector under Coordinate Transformation	Scalar, Vector Tensor
3	Vector Analysis 3	Production of Two Vectors	Scalar Product, Vector Product
4	Kinematics 2	Kinematics in Cylindrical and Spherical Coordinate System	Centripetal Acceleration and Colioris Acceleration
5	Spatial Derivative of Fields 2	Derivative and Integral	Curl, Integral of field, Gauss Theorem, Stoke's Theorem
6	Rectilinear Motion	Newton's Law of Motion Motion in 1-dimension	Frictional Force, Work, Energy
7	Energy 2	Energy in 3-D	Conservative Force
8	Motion in 3-D 2	Free Fall with Drag Force	Successive Approximation
9	Motion in 3-D 3	Lorentz Force and Constrained Motion	Helical Motion, Cyclotron Frequency, Constraining Force
10	Oscillation 1	Simple Harmonic Oscillation	Period, Angular Frequency
11	Oscillation 2/Damped Oscillation 1	Simple Harmonic Oscillation	Simple Pendulum, Lissajous Figure
12	Damped Oscillation 2/Forced Oscillation 1	Damped Harmonic Oscillation	Configuration Space, Phase Space
13	Forced Oscillation 2/Forced Oscillation 3	Driven Damped Harmonic Oscillation	Seismograph, Resonance Peak, Quality Factor, Power Resonance
14	Forced Oscillation 4/Nonlinear Oscillation 1	General Driving Force	Green Function Method
15	Nonlinear Oscillation 2	Nonlinear System	Attractor, Chaos, Fractal