PHYS 203	Topics for the Final Exam
Chapter 2:	Kinematics in 1 and 2 dimensions Conservation of energy, work Motion with resistance forces
Chapter 6:	Functional optimization Constraints
Chapter 7:	Lagrangian equations Canonical Momentum Hamiltonian Equations Cyclic coordinates Forces of constraint Frequency of small oscillations
Chapter 5:	Force and potential due to gravity Potential due to mass distribution
Chapter 8:	Effective potential with angular momentum Elliptic Orbits Orbits in arbitrary force law Orbital Precession and stability
Chapter 9:	Scattering Cross-section
Chapter 3:	Simple Harmonic Oscillator with damping Green's function
Chapter 12:	Coupled oscillators Eigenfrequencies and eigenvectors
Chapter 13:	Wave equation Boundary and initial conditions Standing waves
Chapter 10:	Forces in non-inertial coordinate systems Coriolis force
Chapter 11:	Tensor moment of inertia Principal moments of inertia Euler equations for rotation Motion of a rotating top
Mathematical	concepts: Separable differential equations Second order linear differential equations Taylor expansion Eigenvectors and Eigenvalues

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