PHYS 5311 Classical Mechanics (3 semester hours) A course that aims to provide intensive training in problem solving. Rigorous survey of Newtonian mechanics of systems, including its relativity principle and applications to cosmology; the ellipsoid of inertia and its eigenstructure, with applications, Poinsot's theorem; Euler's equations, spinning tops; Lagrangian and Hamiltonian formalism with applications; chaos, small oscillations, velocity dependent potentials, Lagrange multipliers and corresponding constraint forces, canonical transformations, Lagrange and Poisson brackets, Hamilton-Jacobi theory. (3-0) Y (2016-02-05 22:19:37)