Physics 200B **Mechanics II** **Winter 2013**

Texts and References

Required:

i.) "Theoretical Mechanics of Particles and Continuua", A. Fetter, D. Walecka
ii.) "Nonlinear Mechanics", A. Fetter, D. Walecka

Strongly Recommended:

"Mechanics", L.D. Landau, E.M. Lifshitz OR "Classical Mechanics", H. Goldstein, et al.

References

I.) Fluids

a.) L.D. Landau and E.M. Lifshitz; "Fluid Mechanics"
b.) G.K. Batchelor; "Introduction to Fluid Dynamics"
c.) S. Chandrasekhar; "Hydrodynamic and Hydromagnetic Stability"

II.) Nonlinear Oscillations and Waves

a.) G.B. Whitham; "Linear and Nonlinear Waves"
b.) J. Lighthill; "Waves in Fluids"
c.) L.D. Landau and E.M. Lifshitz, "Electrodynamics of Continuous Media"

III.) Rigid Body Dynamics

a.) L.D. Landau and E.M. Lifshitz; "Mechanics"
b.) H. Goldstein; "Classical Mechanics"
c.) E. Whittaker; "A Treatise on the Analytical Dynamics of Particles and Rigid Bodies"

IV.) Noisey Dynamics

a.) N. Wax; "Selected Papers on Noise and Stochastic Processes"
b.) L.D. Landau and E.M. Lifshitz; "Statistical Physics, Vol. I")
c.) E.M. Lifshitz and L. Pitaevski; "Physical Kinetics"
d.) R. Serra, et al.; "Introduction to the Physics of Complex Systems"
e.) L.P. Kadanoff; "Statistical Physics"
f.) N.G. Van Kampen, "Stochastic Processes in Physics and Chemistry"

V.) Hamiltonian Chaos

a.) M. Tabor; "Chaos and Integrability in Nonlinear Dynamics"
b.) A.J. Lichtenberg and M. Lieberman; "Regular and Chaotic Dynamics"
c.) E. Ott, "Chaos in Dynamical Systems"