**PHYSICS 5210 WINTER 2014**

Instructor: P. Keyes, 239 Physics Research Bldg., tel. 577-2606 , [keyes@wayne.edu](mailto:keyes@wayne.edu)

Office Hours: Mon. and Wed. 4-5 p.m., and by appointment.

Text: *Classical Mechanics* by John R. Taylor (the same text as last semester)

Exams: I - Feb. 7, II - Mar. 7, III - Apr. 11.

Final Exam: 1:20 p.m. - 3:50 p.m., Fri., April 25.

Grading: 1/6 for each hour exam, 1/3 for the final exam, 1/6 for homework.

Homework will be assigned weekly and collected one week later. Late homework will not be accepted.

Topics

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Review of PHY5200

(*Chap. 9*) Mechanics in Non-inertial Frames. *(HW due 1/17 and 1/24)*

(*Chap. 10*) Rotational Motion of Rigid Bodies. *(HW due 1/24 and 1/31)*

------------------------------------------ Exam I --------------------------------------------------------------------------

*(Chap 11)* Coupled Oscillators and Normal Modes. (*HW due 2/14 and 2/21)*

­­­­­­­­­­­*(Chap. 13)* Hamiltonian Mechanics *(HW due 2/28)*

------------------------------------------- Exam II ---------------------------------------------------------------------

*(Chap. 14)* Collision Theory. *(HW due 3/21 and 3/28)*

*(Chap. 16)* Continuum Mechanics. *(HW due 3/28 and 4/4)*

------------------------------------------- Exam III --------------------------------------------------------------------

*(Chap. 12)* Nonlinear Mechanics and Chaos. *(HW due 4/18)*