

PHY 321: Classical Mechanics I
(Spring 2014)

Instructor: Scott Bogner, NSCL 221
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Lectures: BPS 1420 MWF 3:00 - 3:50 PM

Course website: www.nscl.msu.edu/~bogner/PHY321/

Office Hours: 2:30-3:30 PM T and Th and by appointment

Grader: Kritsada Kittimanapun , kittiman@msu.edu

Required Textbook: “Classical Dynamics”, Thornton and Marion, 5th ed.

Topics Covered (tentative):

- Vector calculus review (Ch. 1)
- Newtonian mechanics (Ch. 2)
- Dynamics of a system of particles (Ch. 9)
- Collisions and scattering (Ch. 9)
- Oscillations and resonance (Chapter 3)
- Non-linear oscillations (Ch. 4)
- Gravitation and central force motion (Ch. 5 and 8)
- Lagrangian and Hamiltonian mechanics (Ch. 7)

Grading Procedure: Final grades will be based on the following components: (i) Homework - 25%, (ii) 3 midterm exams - 45%, (iii) Final exam - 30%.

Homework: There will be 11 assignments, roughly one per week. Homework will be due on Wednesdays (usually) before the start of class. Late homework will not be accepted. You are welcome to consult with your peers when doing your homework, but you are responsible for completing the problems yourself. Please present your homework in a logical and readable form. Solutions to the homework problems will be posted on the web. Your lowest score will be dropped.

Words of advice: Form study groups to work thru the HW problems and discuss the material. Stay up-to-date with the reading assignments. Check the course website for lecture notes, HW solutions, and an up-to-date schedule. Don't be afraid to ask questions in or outside of class. If you have questions outside the designated office hours, swing by my office anyway. If I'm not in the middle of something, I'll try to help you.

ADA Accomodations: Any student who, because of a disability, may require special arrangements in order to meet course requirements should contact me as soon as possible to make necessary arrangements in coordination with the RCPD office.