

Syllabus for Physics 4319 - Advanced Mechanics

Dr. Ramon Lopez

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Office Hours:

11-12, Tuesday or by appointment

Email is the best way to communicate with me.

Textbook-

Classical Dynamics of Particles and Systems, by Thornton and Marion, 5th Edition

We will cover, some basic math and physics (matrix algebra, vector calculus, a review of Newton's Laws), Lagrangian and Hamiltonian dynamics, central forces (particularly gravity) and orbits, linear and nonlinear oscillators, and special relativity (time permitting).

Homework-

Homework will be assigned regularly from the book. You will do better if you work in study groups.

Notecards-

At the end of each class you are to fill out an indexcard with a question you have about the class content (either from the lecture or from the reading) and turn it in.

Grading-

Exams (3 total, lowest exam grade dropped) - 40%

Homework- 25%

Notecards - 5%

Final Exam - 30%