

Physics 410 F18 Info and Syllabus

Instructor: Prof. Adil Hassam, AVW3307, 5-1417, hassam@umd.edu

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Class times: Tue-Thu 9:00am-10:50am in PHY 1201

Class web page: <https://terpconnect.umd.edu/~hassam/410/phys410.html>

Textbooks: Classical Mechanics by John R. Taylor (required)
Classical Mechanics by Baeirlein (recommended extra reading)

Homework: Homework will typically be assigned on a weekly basis. Most homework problems will be assigned from the text by Taylor. Details to follow.

Grading Criteria: 20% Homework, 50% Two Midterms, 30% Final.

Syllabus: Physics 410 is about the theoretical foundations and applications of classical mechanics. We will study and apply Newton's Laws and develop the fundamental concepts of momentum and energy conservation. Damped and driven oscillations will be studied. We will introduce phase space and Lagrangian mechanics. The central force problem will be examined. We will extend inertial frame descriptions to mechanics in noninertial reference frames. Other topics will be chosen from rotational motion of rigid bodies, coupled oscillators and normal modes, Hamiltonian mechanics, and relativity. 4 Credits.

Attendance: Attendance in lectures is *strongly* encouraged. Generally, I will follow the text closely. However, my emphases will obviously be significantly nuanced.

Office Hours: Tentative: Wednesdays 12.00pm - 1.00pm. Feel free to stop by at other times, but email ahead to make sure I am there.

Final Exam: TBA

Academic Integrity: The university has approved a code of academic integrity available on the web. The code prohibits students from cheating on exams, plagiarizing papers, submitting the same paper for credit in two courses without authorization, buying papers, submitting fraudulent documents, or forging signatures. The university senate requires that students include the following signed statement on each examination or assignment: I pledge on my honor that I have not given or received any unauthorized assistance on this examination (or assignment). Compliance with the code is administered by a student honor council, which strives to promote a community of trust on the College Park campus. Allegations of academic dishonesty may be reported directly to the honor council (301-314-9154) by any member of the campus community.