2022

Classical Mechanics

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CUNY City College

PHYSICS 35100D Spring 2023 (MR417N) MW 2:00-3:40

Current version: syllabus.pdf Professor: Mark Shattuck (markdshattuck@gmail.com) Office: Steinman Hall T1M-16 x8161, (MR419) Office Hours: M 4:00-6:00 (MR419) (or by App.) Website: https://gibbs.ccny.cuny.edu/teaching/	Textbook: Gregory, R. Douglas. *Classical Mechanics*, Cambridge University Press, 2006. *ProQuest Ebook Central* https://ebookcentral.proquest.com/lib/ccny-ebooks/detail.action?docID=255140

1/25(W)	Overview, Vectors, Linear Algebra, Newton's Laws, Conversation , Linear Momentum	**D: Ch 1-2, 9-11**
1/30, 2/1	Newton's Laws, Torque, Angular Momentum, Drag, Many-Body ,Conservation	**D: Ch 3-4; PSet 1: Due 2/6**
2/6, **2/8**	Newton's Laws, Conservation, Drag, Gravitation	**D: Ch 5-6; PSet 2: Due 2/15**
2/15(W)	Linear oscillations	**D: Ch 7; PSet 3: Due 2/21**
2/20, 2/21(**Tu**), 2/22	Non-linear oscillations	**D: Ch 8; PSet 4: Due 2/27**
2/27, 3/1	Review	**Exam I (3/1) D: Ch 1-11**
3/6, **3/8**	Calculus of Variations, Lagrangian mechanics	**D: Ch 12-13; PSet 5: Due 3/13**
3/13, 3/15	Lagrangian mechanics	**D:Ch 12-13 PSet 6: Due 3/20**
3/20, 3/22	Coupled oscillations	**D:Ch 15 PSet 7: Due 3/27**
3/27, 3/29	Review	**Exam II (3/29) D:12-15**
4/3 (M)	Two-body central force problem	**Notes PSet 8: Due 4/17**
4/17, 4/19	Rigid body kinetics	**D:Ch 16 PSet 9: Due 4/24**
4/24, 4/26	Non-inertial reference frames	**D:Ch 17-18 PSet 10: Due 5/1**
5/1, 5/3	Rigid body dynamics	**D:Ch 19 PSet 11: Due 5/8**
5/8, 5/10	Hamiltonian mechanics, Choas	**D:Ch 14**
Final Exam (TBA)	**D:1-13, 15-19, Two-body central force**	
No Class	**2/13, 4/5-4/13 (spring recess)**	
Special Class	**2/21 (Tu->M), 2/6, 2/8, 3/6, 3/8 (Class online)**	

General Information

Attendance: 5% of grade from class participation.

Reading Assignment: Reading assignments should be completed before class.

Grades: Grade will be based on class participation (**5%**), two in class exams (**30%**), an in class final exam (**30%**), and weekly problem sets (**35%**). The problem set can be legibly handwritten or typed, but **must** be **submitted electronically as a PDF file to on Blackboard**.

Academic Integrity and Plagiarism: The CCNY Policy on Academic Integrity will be strictly adhered to. The document entitled, "CUNY Policy on Academic Integrity" is available from the link at the bottom of the CCNY Home Page. Make sure you have read the details regarding plagiarism and cheating, and be clear about the rules that the college follows. Cases where academic integrity is compromised will be prosecuted to the fullest extent according to these rules.