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PHY 132: Classical Physics II

Spring 2017

Instructor:

Professor Thomas Weinacht - A-102 - (28163) - Thomas 'dot' Weinacht 'at' stonybrook.edu
Monday Wednesday Friday 10:00-11:50

Teaching Assistants:

Giulia Bertino
Grant Richmond

Topics

Electric Fields and Forces
Electric Potential
DC Circuits
Capacitance and Dielectrics
Magnetic Fields
Ampere's and Biot Savart Law
Induction and Faraday's Law
AC circuits
Maxwell's equations and EM Waves
Reflection Refraction
Lenses and Optical Instruments
Interference
Diffraction

Textbook

Physics for Scientists and Engineers (Fourth Edition) Douglas Giancoli

Grading

Homework - 20%
Midterm I - 15%
Midterm II - 15%
Laboratory Work - 20%
Final Exam - 30%

Homework

The problem sets will be on Mastering Physics and are due on Tuesdays at 11:59 pm

Labs

The laboratory work will consist of 10 labs. All labs will be graded in class. In addition, you will need to write formal reports for three of the labs and submit those according to the schedule below.

Class Schedule

Week Starting	Topic	HW & Lab	Book	Monday	Wednesday	Friday
Jan 23	Electric Fields and Forces	None	Ch 21	L01	L02	L03
Jan 30	Electric Potential & Gauss' Law	HW #1	Ch 22,23	L04	L05	Lab1: E Field Plotting
Feb 6	DC Circuits	HW #2	Ch 25,26	L06	L07	Lab 2:Circuits
Feb 13	Capacitance & Dielectrics	HW #3	Ch 24	L08	L09	Lab 3:Capacitance
Feb 20	magnetic Fields	HW #4	Ch 27	L10	L11	Lab 4:Magnetic Force
Feb 27	Ampere's & Biot Savart Laws	Lab Report #1	Ch 28	L12	L13	Midtern I
Mar 6	Induction & Faraday's Law	HW #5	Ch 29	L14	L15	Lab 5:Faraday's Law
Mar 13	Spring Break	---	---	---	---	---
Mar 20	AC Circuits	HW #6	Ch 30	L16	L17	Lab 6:RLC Circuits
Mar 27	Maxwell's Eqns & EM Waves	HW #7	Ch 31	L18	L19	Lab 7:Electric Motor

Apr 3	Reflection & Refraction	Lab Report #2	Ch 32	L20	L21	Midterm II
Apr 10	Lenses & Optical Inst	HW #8	Ch 33	L22	L23	Lab 8:Lenses
Apr 17	Interference	HW #9	Ch 34	L24	L25	Lab 9:e/m of electron
Apr 24	Diffraction	HW #10	Ch 35	L26	L27	Lab 10:Diffraction
May 1	Review	Lab Report #3	Review	Review	Review	Review

SPECIAL NEEDS: If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, ECC (Educational Communications Center) Building, room 128, (631) 632-6748. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential. Students requiring emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information, go to the following website: <http://www.ehs.sunysb.edu/fire/disabilities/asp>