

SYLLABUS

PHYS 260 (Sections 0101 to 0105) – Fall 2016

General Physics: Vibration, Waves, Heat, Electricity and Magnetism

INSTRUCTOR: [Professor Eun-Suk Seo](#)
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Phone: 301-405-4855
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Home page: <http://cosmicray.umd.edu>
Office Hours: MW 2:00 – 3:00 PM, or by appointment.

LECTURE: MW 4:30 – 5:45 PM, Rm 1412, Physics Building

REQUIRED TEXTBOOK: Physics for Scientist and Engineers - A Strategic Approach with *Mastering Physics*, third edition, by Randall D. Knight (Published by Pearson)

COURSE DESCRIPTION: PHYS 260 is a 3-credit course covering various topics including waves, fluids, heat, thermodynamics, electrostatics and electrical circuits. It is the second course of a three-semester calculus-based general physics course designed for engineering students. PHYS 260 and PHYS 261 are recommended to be taken in the same semester. If you have already completed the lab (PHYS261) with a satisfactory grade but still need to take or retake the lecture (PHYS 260), you won't have to repeat the lab.

PREREQUISITE(S): PHYS 161 and MATH 141. Co-requisite: PHYS 261. Credit granted only for: PHYS 142, (PHYS 260 and PHYS 261), or PHYS 272.

DISCUSSIONS: Discussion sessions will give you an opportunity to obtain clarification of the material presented in class, on in the textbook. Homework problems and Exam questions will be discussed. This is an opportunity to get help from the Teaching Assistant (TA) and from fellow students.

Section	0101	0102	0103	0104	0105
Time	Tu 11:00 -11:50 am	W 10:00 – 10:50 am	W 8:00 - 8:50 am	W 9:00 – 9:50 am	F 3:00 – 3:50 pm
Location	HBK 1108	PHY 0405	PHY 1219	PHY 0405	PHY 1204
TA	Tornike Ghutishvili	Kaustubh Deshpande	Tornike Ghutishvili	Tornike Ghutishvili	Tornike Ghutishvili

TEACHING ASSISTANTS:

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HOMEWORK: Homework assignments will be made using *Mastering Physics* every week. The due dates are specified on *Mastering Physics* <http://www.masteringphysics.com>. Late homework will not be accepted. No makeup will be possible. You should start working on the homework problems as soon as they are available. You will get immediate feedback from *Mastering Physics* on whether your answer is correct or not. You are allowed to make a number of attempts to get the right answer. You are graded only on your final answers and get your score when you are done. Answer keys will be available on *Mastering Physics* after the grading is completed. Full solutions for the homework assignments will be discussed at the Discussion sessions with the Teaching Assistant (TA). There will also be “Practice” assignments which are given to help you get familiar with *Mastering Physics* and to make more example problems available to you. Assignments with “Practice” tagging are not for

grade but for your practice. Your lowest homework grade can be dropped. If you miss a homework assignment due to illness or an emergency, that will be the homework that is dropped.

For the electronic homework submission: Go to <http://www.masteringphysics.com> and register using your access key number for the **course ID: MPSEO39509** for you to be able to submit your Homework. It is encouraged to register as soon as possible before the first day of class.

EXAMS: There will be three in-class exams and one two-hour final exam. The exam will include problems and conceptual questions. There will be no make-up exams. The lowest score of three in-class exams can be dropped. Students must take the final exam to pass the course.

Tentative Exam Schedule:

Exam 1	Monday October 3, 4:30-5:45 PM
Exam 2	Monday October 31, 4:30-5:45 PM
Exam 3	Monday November 28, 4:30-5:45 PM
Final Exam	Thursday December 15, 6:30 – 8:30 PM

GRADE: PHYS 260 grade will be computed as following:

Homework	20%
Midterm Exams	50%
Final Exam	30%

COURSE POLICIES: Students are responsible for all of the material in every covered chapter, regardless of whether or not the material was specifically mentioned in class. During the lecture we will focus on the material causing difficulties. Students are expected to keep a notebook and electronic excel spreadsheets to document their work. Lecture notes, exam grades and course related announcements will be available on <http://elms.umd.edu/>. For the University policies visit <http://www.ugst.umd.edu/courserelatedpolicies.html>.

TUTORING: If you are experiencing any difficulties with the course material get help as soon as possible. The Physics Department has a free tutoring service, the Slawsky Clinic, run by retired senior physicists on a walk-in, first-come, first-served basis. It is located in Room 1214 in the Toll Physics building. It is open during the semester typically M-F 10 AM - 3 PM. You can also get help in hiring a private tutor. The Physics Department maintains a list of people who offer such services – see <http://umdphysics.umd.edu/academics/academic-support.html>. If you are overwhelmed with course loads and time management, a free academic counseling is available from Learning Assistance Service, 2202 Shoemaker Building.

ACADEMIC INTEGRITY: The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitating academic dishonesty, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit <http://www.shc.umd.edu>.

DISABILITIES: Students with documented disability should contact Professor Seo at the beginning of the semester (within the first week) to discuss accommodations.

UNIVERSITY CLOSURE: If the University is closed due to weather or some emergency situation the scheduled class activities will be rescheduled. Closing/opening is announced over local radio/TV and the University's

homepage: <http://www.umd.edu/>. The course specific instructions will be given on <http://elms.umd.edu/> as needed.

RELIGIOUS OBSERVANCES: If students need to miss class, discussion, a homework deadline, or an exam due to a religious observance, students must discuss possible schedule conflict with the instructor in advance, at the beginning of the semester so appropriate arrangements could be made.

TENTATIVE CLASS SCHEDULE:

PHYS 260 Fall 2016, Phys Bldg. Rm 1412		
DATE	Chapters	TOPIC
Aug 29	16	A Macroscopic Description of Matter
Aug 31	16	A Macroscopic Description of Matter
Sep 5	NO CLASS -- Labor Day	
Sep 7	17	Work, Heat and the First Law of Thermodynamics
Sep 12	17	Work, Heat and the First Law of Thermodynamics
Sep 14	18	The Micro/Macro Connection
Sep 19	18	The Micro/Macro Connection
Sep 21	19	Heat Engines & Refrigerators
Sep 26	19	Heat Engines & Refrigerators
Sep 28	20	Traveling Waves
Oct 3	EXAM #1	
Oct 5	20	Traveling Waves
Oct 10	21	Superposition
Oct 12	21	Superposition
Oct 17	25	Electric Charges and Forces
Oct 19	26	The Electric Field
Oct 24	26	The Electric Field
Oct 26	27	Flux, Gauss's Law
Oct 31	EXAM #2	
Nov 2	27	Flux, Gauss's Law
Nov 7	28	The Electric Potential
Nov 9	28	The Electric Potential
Nov 14	29	Potential and Field
Nov 16	29	Potential and Field
Nov 21	30	Electric Current and Resistance
Nov 23	NO CLASS -- Thanksgiving Recess	
Nov 28	EXAM #3	
Nov 30	31	Fundamentals of Circuits
Dec 5	31	Fundamentals of Circuits
Dec 7 & 12	Review	
Dec 15	FINAL EXAM 6:30 - 8:30 PM	

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DISCLAIMER: The instructor reserves the right to make minor changes to this syllabus to meet the specific needs of the class during the semester.