PHYS 213, Section 001: FLUIDS & THERMAL PHYS

Faculty Information

Title: Assoc. Prof. Physics
Instructor: Dr. Ann Schmiedekamp
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Office Address: 217 W (formerly 214 W)
Office Hours: MWF 12:00-1:00 PM
Wed. 3:00-4:00 PM
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Course Information

Credits: 2
Course: 213
Section: 001
Location: 123W
Times: 1:00-2:50 pm MWF
Start Date: Jan. 14, 2008

Required Text

Halliday, Resnick, Walker, Fundamentals of Physics, part 2
(chapters 12-20), 6th, 7th, or 8th edition
Webassign subscription and access to the internet for the submission of homework are required. Webassign subscriptions may be handled online with a credit card.

Course Description

Third semester of general physics for science and engineering majors. Course includes treatment with calculus. Course topics include: Stress/strain, Fluid statics and dynamics, waves, sound, temperature, heat, first and second laws of thermodynamics and kinetic theory of gases.

Course Objectives

Understanding of the concepts in fluids, waves, sound thermodynamics and elementary statistical mechanics. Skill in problem solving applied to these topics.

Tentative Schedule

Jan. 14 Chap. 12, Sec 7
Jan. 16 Chap. 12; Chap. 14 Fluids
Jan. 18 Chap. 14

Jan. 21 Holiday
Jan. 23 Chap. 14
Jan. 25 Chap. 16 Waves

Jan. 28 Chap. 16 (Class from 12:00 to 2:00pm today.)
Jan. 30 Chap. 16
Feb. 1 Chap. 17

Feb. 4 Chap. 17 sound
Feb. 6 Chap. 17
Feb. 8 Midterm Exam

Feb. 13 Chap. 18
Feb. 15 Chap. 19 Kinetic Theory of Gases

Feb. 18 Chap. 19
Feb. 20 Chap. 19
Feb. 22 Chap. 20 Entropy and the Second Law of Thermodynamics

Feb. 25 Chap. 20 (Class from 12:00 to 2:00pm today.)
Feb. 27 Chap. 20
Feb. 29 Final Exam

Course Prerequisites
Prerequisite: Math 140, Physics 211
Concurrent: Math 141

Grading Policy
Midterm Exam - 30%.
Final Exam 30%
Classwork/homework(using Webassign)/pop quizzes- 40%
Lab assignments turned in late will cost the student one point per day.
Final Exam 25%
Exams will be closed book but important physical constants will be provided. A student is allowed to write both sides of one 3 x 5 inch index card. It is expected that the student will use this card to note important formulas covering the course material. Scientific calculators are allowed during exams and quizzes but other electronic devices may not be used at any time.

A   >  88    C+ = 65-68
A-  = 84-87    C  = 58-64
B+  = 80-83    D  = 52-57
B   = 73-79    F  < 51
B-  = 69-72

Attendance Policy
Pop quizzes and classwork may not be made up. The equivalent of one pop quiz will be subtracted from the grade total to accommodate unavoidable absences. Excessive absences will be detrimental to the grade. Lab exercises can be made up only upon availability of the equipment or classroom. Since many class exercises and all quizzes cannot be made up, excessive absences will negatively affect the class grade. Labs and assignments are due on the due date, even
if the student is absent. Labs may be emailed if the student is not able to attend. If a student has a serious reason for missing an exam the professor must be contacted on or before the date of the exam and evidence should be provided to document the legitimacy of a makeup. A make up exam may be in a different format and could be comprehensive. Immediate notification of the professor on or before the day of the exam is essential if the student must be absent for a legitimate reason.

**Academic Integrity**

Academic honesty is expected of all students at Penn State University. Any reasonable proof of academic dishonesty in the completion of an exam, quiz or homework, may result in sanctions against the student, which may include a grade of zero on an exam, quiz or assignment. Please consult the Abington College Academic Integrity Policy for explanation of what is considered a violation. 
http://www.abington.psu.edu/psasite/cs/shared/Registrar/academicintegritypolicy.html

**Examination Policy**

Pop quizzes and classwork may not be made up. Excessive absences will be detrimental to the grade. Any student who misses the midterm or final exam will be given zero for the grade unless arrangements are made on or before the date and time of the exam. Written proof (doctor’s note or other) will be required for the privilege of a makeup exam.  
a) There are no makeups for pop quizzes. The equivalent of one pop quiz will be subtracted from the grade total to accommodate unavoidable absences.  
b) Lab exercises can be made up only upon availability of the equipment or classroom. Labs and assignments are due on the due date, even if the student is absent. Labs may be emailed if the student is not able to attend.  
c) If a student has a serious reason for missing an exam the professor must be contacted on or before the date of the exam and evidence should be provided to document the legitimacy of a makeup. The make up exam may be in a different format and could be comprehensive. Immediate notification of the professor on or before the day of the final exam is essential if the student must be absent for a legitimate reason.

**Disability Access Statement**

Penn State encourages persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation or have a question about disability services, please contact Anne Prior, Room 315 Sutherland, 215-881-7537.

**Additional Information**

Respect for a proper academic climate during class is expected of all students. Please turn off cell phones before entering the classroom to avoid disruption. Due to safety regulations, no food or drinks may be consumed in the physics labs. Open toe shoes are also banned due to safety regulations. Free peer and professional tutoring and study skill coaching are available at the Learning Center (Room 315 Sutherland, 215-881-7538). Students striving for an “A” and students struggling for a “C” agree that they benefit from tutoring sessions.