

PHYS 2020-001: GENERAL PHYSICS II

COURSE SYLLABUS for FALL 2008

Instructor: Dr. Gary Henson Office: Rm S-272 Phone: 439-6906 email: hensong@etsu.edu
Office Hours: 10:00-11:30 MWF, 11:15-12:35 TR or by appt.

Text: *College Physics*, 7th Edition, by Serway & Faughn

Recommended supplement: *Schaum's College Physics 8th (or 9th) ed.* ... by Bueche

Course Website <http://www.etsu.edu/physics/henson/henson.htm> [will have problem assignments, answers, and sample tests, etc.]

Capa Homework Website <http://capa.etsu.edu>

General Physics II is the second semester of a two semester survey course in algebra-based physics; topics will include electricity and magnetism, waves, light and optics, and nuclear physics. Lectures will include a demonstration/experiment of physical phenomena followed by a brief development of the mathematical relations used to describe the phenomena. Numerical solutions to problems involving the phenomena and examples of applications of concepts and principles will then be presented. Please feel free to consult with me outside of class if you are having unusual difficulty with the course. The problem-solving techniques of this course will be new to many of you and you may need special assistance. Also contact me if you have need for test taking or note taking accommodation or have questions about the grading procedure or your own grade at any time.

NOTE: GENERAL PHYSICS IS A PROBLEM-SOLVING COURSE—I.E., YOUR PERFORMANCE IN THIS COURSE WILL BE MEASURED BY YOUR ABILITY TO SOLVE NUMERICAL PROBLEMS AND EXPLAIN PHYSICAL PHENOMENA, NOT BY YOUR ABILITY TO RECITE A FORMULA OR LAW OF PHYSICS. THE ONLY PROVEN METHOD BY WHICH YOU CAN LEARN TO SOLVE SUCH PROBLEMS IS TO WORK OUT THE ASSIGNED PROBLEMS AT THE END OF EACH CHAPTER, APPLYING THE APPROPRIATE CONCEPTS, LAWS, OR THEORIES. THE MORE PROBLEMS YOU LEARN TO WORK, THE BETTER YOU WILL PERFORM ON THE EXAMS. THE EXAMS WILL CONSIST OF PROBLEMS AND QUESTIONS SIMILAR TO THOSE IN THE TEXTBOOK AND OTHER EXAMPLES I MAY WORK IN CLASS. FUNDAMENTAL CONCEPTS AND PRINCIPLES DISCUSSED IN THE LECTURE WILL BE COVERED BY BOTH THE NUMERICAL PROBLEMS AND MULTIPLE CHOICE QUESTIONS.

Your grade will be based on your performance on four regular exams, a comprehensive final exam, plus computer graded homework. The regular exams will consist of three problems as described above (each problem will be graded on a 5 point scale) and 15 multiple choice questions (each worth one point). Thus, each exam is worth a total of 30 points. The final exam will consist of 6 problems and 20 multiple choice questions for a total of 50 points. In addition, 9 homework sets consisting of ~ 5 problems each will be assigned from the CAPA online system (see below). Each homework problem is worth 1 point for a total of 45 points. Thus, there will be a total of 215 points possible for the course. I will not put a letter grade on your returned exams, but final grades will be assigned according to the percentage scale below (based on the 215 pt. total):

A \geq 92.6%	B- = 78-81.9%	D+ = 60-64.9%
A- = 90-92.5%	C+ = 74-77.9%	D = 55-59.9%
B+ = 86-89.9%	C = 70-73.9%	F < 55%
B = 82-85.9%	C- = 65-69.9%	

Calculators will be allowed for all exams, but formula notecards will not! I will provide a list of any necessary constants but you will be responsible for ALL formulas, equations, relationships, etc. involving geometry, trigonometry, algebra, and physics that may be required to solve a test problem.

SPECIAL NOTES: ALL EXAMS COUNT; NONE ARE "DROPPED". BUT IF YOU TAKE ALL FOUR REGULAR EXAMS, THEN YOUR FINAL EXAM GRADE (%) WILL BE USED TO REPLACE YOUR LOWEST REGULAR EXAM GRADE IF IT WILL HELP YOUR AVERAGE. THERE ARE NO "EXTRA CREDIT" ASSIGNMENTS. IF YOU MAKE 60% OR BETTER ON THE FINAL, AND IF YOU HAVE TAKEN AT LEAST THREE OF THE REGULAR EXAMS, THEN YOU WILL RECEIVE A PASSING GRADE FOR THE COURSE. IF YOU MAKE LESS THAN 50% ON THE FINAL, THEN YOU WILL RECEIVE A FAILING GRADE FOR THE COURSE.

You are expected to attend class regularly and should note the dates for each exam given in the schedule below. *NOTE that there are no make-up exams scheduled.* If you miss an exam, and if you promptly provide me, in writing, a verifiable & acceptable excuse for missing, then that exam will be considered your "low" score and replaced as described in the "special notes" above. Extraordinary situations (school sponsored activities, serious health problems, etc.) will be handled on an individual basis but you must communicate with me promptly. ***Please remember that it is your responsibility to initiate the procedure if you miss graded material.***

CLASS SCHEDULE FOR PHYS 2020-001

FALL 2008

** See my website for suggested end of chapter questions & problems, a list of major concepts for each chapter, and sample exam questions with answers (although I am not posting full solutions).

Chapter	Read Sections
CH 15	Electric Forces and Fields 15.1 thru 15.6
CH 16	Electrical Energy and Capacitance 16.1 thru 16.7, 16.9
CH 17	Current and Resistance 17.1, 17.3 thru 17.5, 17.8

EXAM 1 Tuesday, September 16

CH 18	Direct Current Circuits 18.1 thru 18.4, 18.7
CH 19	Magnetism 19.1, 19.3 thru 19.9
CH 20	Induced Voltages and Inductance 20.1 thru 20.5

EXAM 2 Thursday, October 9

CH 13	Vibrations and Waves 13.1 thru 13.4, 13.7 thru 13.11
CH 14	Sound 14.1, 14.4 thru 14.10
CH 21	Electromagnetic Waves 21.8 thru 21.12

EXAM 3 Tuesday, November 4

CH 22	Reflection and Refraction 22.1 thru 22.5, 22.7
CH 23	Mirrors and Lenses 23.1 thru 23.4, 23.6
CH 24	Wave Optics 24.1, 24.2, 24.6 thru 24.9

EXAM 4 Tuesday, November 25

CH 29	Nuclear Physics 29.1 thru 29.6
CH 30	Nuclear Energy 30.1 thru 30.5

Comprehensive Problems

FINAL EXAM Thursday, December 11, 8:00 AM

ONLINE CAPA (Computer Assisted Personalized Approach) HOMEWORK

Homework assignments can be accessed by going to <http://capa.etsu.edu> . From the CAPA homepage, first click on the “Login to CAPA” link. On the login page, make sure the “Class” is listed as **gp2trfal08** and then enter your 9-digit student number and the 4-digit homework set ID number. Then click on the “Here” button to work on CAPA and on the next page click on the “Try current set” button to view your homework questions.

There are help pages and you can also view your current CAPA grade status as well as view “previous” homework problem sets with the correct answers displayed. You may log in and out of CAPA as many times as you wish. You can submit answers one problem at a time or together. You may find it most helpful to **print out your problem set first** and then work on the problems away from the computer until you have solutions completed. **NOTE: CAPA will not look at whether or not your answer is correct IF the format is wrong! FOR EXAMPLE, if you enter “mn” for length units [instead of mm] CAPA will respond with a “U” for that attempt. This means the units are not acceptable EVEN IF YOUR NUMERICAL ANSWER IS CORRECT! You must fix the units first before CAPA will grade the answer. ONLY a response of “N” implies your numerical result is incorrect.**

I have listed the due date/time for each problem set below. This will also be displayed at the top of your individual homework problem pages. I have set the due time in the mornings with the intent that you finish each set BEFORE class so that I may discuss the problem solutions during that class period. CAPA will display the answers to each set 1 hour after the due date/time. To see these answers, simply enter the number of the homework set (1, 2, 3, etc.) and Click on the “View previous set” button.

PAY ATTENTION to the problem due dates, they will not be changed!!

<u>Homework Set #</u>	<u>Date Due</u>	<u>Time Due</u>
1	9/4	9:30 AM
2	9/11	9:30 AM
3	9/25	9:30 AM
4	10/7	9:30 AM
5	10/23	9:30 AM
6	10/30	9:30 AM
7	11/13	9:30 AM
8	11/20	9:30 AM
9	12/4	9:30 AM