

## PHYS 2020-002: GENERAL PHYSICS II

## COURSE SYLLABUS for FALL 2009

Instructor: Dr. Gary Henson Office: Rm S-272 Phone: 439-6906 email: hensong@etsu.edu  
Office Hours: 10:30-11:20 MWF, 03:30-05:00 T, or right after class

Text: *College Physics*, 8th Edition, by Serway & Faughn

Recommended supplement: *Schaum's College Physics 9<sup>th</sup> ed. ...* by Bueche

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

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 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 five regular exams (25 pts each) and a final exam (50 pts). Each regular exam will consist of 2 problems as described above and 15 multiple choice questions with the Final Exam consisting of six such problems and 20 multiple choice questions. The Final Exam is comprehensive. Total points possible for the course will be 175 points. Final grades will be assigned according to the percentage scale below:

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 FIVE 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 FOUR 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 2020-002**

**FALL 2009**

**\*\*** See my website for suggested end of chapter questions & problems, answers to even numbered problems, and sample exam questions with answers (although I am not posting full solutions).

<b>Chapter</b>		<b>Read Sections</b>
CH 15	Electric Forces and Fields	15.1 thru 15.6
CH 16	Electrical Energy and Capacitance	16.1 thru 16.7, 16.9
<b><u>EXAM 1 Monday, September 21</u></b>		
CH 17	Current and Resistance	17.1, 17.3 thru 17.5, 17.8
CH 18	Direct Current Circuits	18.1 thru 18.4, 18.7
<b><u>EXAM 2 Wednesday, October 7</u></b>		
CH 19	Magnetism	19.1 thru 19.9
CH 20	Induced Voltages and Inductance	20.1 thru 20.5
<b><u>EXAM 3 Wednesday, October 28</u></b>		
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
<b><u>EXAM 4 Friday, November 13</u></b>		
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
<b><u>EXAM 5 Friday, December 4</u></b>		
CH 29	Nuclear Physics	29.1 thru 29.6
CH 30	Nuclear Energy	30.1 thru 30.5
Comprehensive Problems		
<b><u>FINAL EXAM Wednesday, December 16, 1:20pm – 3:20pm</u></b>		