PHYS 2010-003: GENERAL PHYSICS I 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, 3:30-5:00 T, or by appt.
Text: *College Physics*, 8th Edition, by Serway & Vuille
Recommended supplement: *Schaum's College Physics 9th ed.* ... by Bueche
Course Info at: www.etsu.edu/physics/henson/henson.htm [will have problem assignments, sample tests, etc.]

General Physics I is the first semester of a two semester survey course in algebra-based physics; topics will include motion, forces, energy, the properties of solids, liquids, and gases, and heat and thermodynamics. General Physics II is the second semester of the course and includes vibrations, wave motion, sound, electricity, magnetism, geometrical optics, and (briefly) atomic and nuclear physics. The two semesters should be taken in sequence, and General Physics Laboratories I & II are strongly recommended to accompany the basic lecture courses. 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 PREDOMINANTLY A PROBLEM-SOLVING COURSE—I.E., YOUR PERFORMANCE IN THIS COURSE WILL BE MEASURED BY YOUR ABILITY TO SOLVE NUMERICAL PROBLEMS AND YOUR UNDERSTANDING OF 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 AND UNDERSTAND CONCEPTS IS TO PRACTICE WORKING HOMEWORK PROBLEMS AND PROBLEMS IN THE TEXTBOOK. THE EXAMS WILL CONSIST OF PROBLEMS SIMILAR TO THE TEXTBOOK PROBLEMS, IN CLASS EXAMPLES, AND HOMEWORK PROBLEMS. IN ADDITION TO SUCH NUMERICAL PROBLEMS, ABOUT 1/2 THE EXAM WILL CONSIST OF MULTIPLE CHOICE QUESTIONS WHICH WILL PERTAIN TO THE FUNDAMENTAL CONCEPTS AND PRINCIPLES FROM THE MATERIAL COVERED.

Your grade will be based on your performance on a math skills quiz (5 pts), five regular exams, and a comprehensive final exam. The regular exams will consist of two 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 25 points. The final exam will consist of 6 problems and 20 multiple choice questions for a total of 50 points. Thus, there will be a total of 180 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 180 pt. total):

A >= 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. I will provide a list of all relevant equations for the final exam only! I may also randomly assign seats for each exam and will not allow "caps" to be worn during exams.

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 NOT RECEIVE A PASSING 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 2010-003 SPRING 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).

Chapter	**Topic (Read all sections unless directed to "omit" a section)**
CH 1	Units, Dimensions, Conversions, Coordinates, Trigonometry & Algebra

Math Skills Quiz: Friday, September 4

CH 2	One Dimension Motion, Velocity and Acceleration, Free Fall

EXAM 1 Wednesday, September 16

CH 3	Vectors and Motion in 2 Dimensions, Projectile Motion, Relative Motion
CH 4	Newton's Laws of Motion, Forces and Friction

EXAM 2 Monday, October 5

CH 5	Work, Kinetic Energy, Potential Energy, Power
CH 6	Momentum, Impulse, Collisions

EXAM 3 Monday, October 26

CH 7 (Omit 7.6)	Rotational Motion with Constant Acceleration, Universal Gravitation
CH 8 (Omit 8.6)	Torque, Conditions for Equilibrium, Moment of Inertia, Angular Momentum
CH 9 (Omit 9.2, 9.8-10)	Density, Pressure, Buoyancy, Fluids in Motion

EXAM 4 Friday, November 13

CH 10	Temperature, Thermal Expansion, Ideal Gases, Kinetic Theory of Gases
CH 11	Heat, Specific & Latent Heat, Calorimetry, Energy Transfer

EXAM 5 Friday, December 4

CH 12 (Omit 12.6)	First and Second Law of Thermodynamics, Heat Engines, Entropy

Final Exam Monday, December 14 3:50pm to 5:50pm

[Ch12 and Comprehensive Problems and Questions]