

**University of Massachusetts Boston
College of Science and Mathematics
Department of Physics
Physics 107, Summer 2006**

Time; MTuWTh 5:30-7:00 pm (lecture), MTh 7:10-8:00 & 8:00-8:50 (Discussion)
Locations; McCormack-2-116 (lecture), McCormack-1-420 & Science-2-062 (Discussion)
Textbook; *Physics*, 6th Edition, Douglas C. Giancoli, Pearson Prentice Hall
Instructor; Dr. Reza Tavakoli
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Grader; Praveen Nittala (praveen.nittala@umb.edu)

SYLLABUS & OUTLINE

Date	Chapter Coverage, Subject	Comments
5/30/2006 5/31/2006 6/1/2006	1: 1-7 Units, conversions 2: 1-7 Kinematics in 1D 3: 1-6 Kinematics in 2D	
6/5/2006 6/6/2006 6/7/2006 6/8/2006	4: 1-5 Dynamics/Newton's Laws 4: 1-9 Problem solving, FBD 5: 1-3 Circular motion Exam #1	One-hour exam: Chapters 1-4, 6/8/2006
6/12/2006 6/13/2006 6/14/2006 6/15/2006	5: 6-8 Gravitation 6: 1-3 Work/kinetic energy 6: 4-10 Potential energy 7: 1-6 Momentum. Impulse, Collusion	
6/19/2006 6/20/2006 6/21/2006 6/22/2006	8: 1-3 Rotational motion 8: 4-8 Rotation dynamics 9: 1-3 Static Equilibrium Exam #2	One-hour exam: Chapters 5-8, 6/22/2006
6/26/2006 6/27/2006 6/28/2006 6/29/2006	9: 4-6 Stability, Elasticity, Fracture 10: 1-6 Fluid dynamics/Pressure 10: 7-10 Buoyancy, Fluid Dynamic 11: 1-9 Vibrations, waves	
7/3/2006 7/4/2006 7/5/2006 7/6/2006	12: 1-2, 4, 6, 7 Sound Holiday, no classes 13: 1-4, 6-8 Temperature, Ideal Gas Laws Exam #3	One-hour exam: Chapters 9-11, 7/7/2006
7/10/2006 7/11/2006 7/12/2006 7/13/2006	14: 1-5 Heat Energy 14: 6-8 Heat Transfer Final Exam	Two-hour exam: Chapters 1-14, 7/12/2006

NOTES ON THE SYLLABUS FOR PHYSICS 107
Summer 2006

The textbook for this course is Physics, 6th Edition, by Douglas C. Giancoli (Pearson Prentice Hall. Upper Saddle River, NJ, 2005)

- The subject matter of the course covers chapters 1-14 of the textbook, consisting of physical units and unit conversions, motion in one and two dimensions (kinematics), Newton's laws of motion (dynamics), work and energy, impulse and momentum, rotational kinematics and dynamics, gravity and its consequences, solids, fluids (liquids and gases), mechanical oscillations, wave motion, sound, temperature and the Zeroth law of thermodynamics, heat and the first law of thermodynamics, and thermal properties and heat transfer.
- Lectures will stay close to text material and the optional problems, to be enumerated on a week-to-week basis, are intended to represent, along with the assigned problems, the scope of problem situations you should become familiar and comfortable with. **Exam questions will be fairly similar to assigned and optional problems.**
- The assigned problems, 2-4 per lecture, should be handed in at the beginning of the on the following day lecture. If slippage of the syllabus occurs, or if the schedule is changed for any other reason, due dates for homework will be changed accordingly.

SOME GROUND RULES FOR THIS COURSE

- A homework assignment should be handed in on its due date. There is too little time during the summer sessions to allow late homework. It then is not graded and handed back in a timely fashion. Because I want to make homework solutions available right after an assignment is due, I must ask your cooperation in **handing in your homework on time**. Only a true emergency will get you any grace on due dates and you must document the emergency.
- Each student should do his or her own individual homework. Homework should not be the joint effort of two or more students. Homework that appears to be the joint effort of two or more students will not be accepted. The Physics 107 Tutors will be instructed not to assist with assigned homework problems until *after* the due dates.
- All four of the term examinations will count in compiling your final numerical grade for the semester. The fourth examination is the final exam and is given on the last day of classes. **No exam scores will be dropped.**
- All exams are closed book and closed class notes. You may bring one 8.5" X 11" sheet of paper into an exam with you. Any information you deem important for the exam you are allowed to have on the sheet (only one side). That includes formulas, definitions, statements of physical laws, etc.

- The course is organized into a lecture section and discussion sections. You **Must** register for a discussion section. Lecture sections meet four times a week and whichever discussion section you register for, meets twice a week. Discussion sections are, as the name implies, sections where we discuss what went on in lectures. We can solve optional problems there. Lecture sections and discussion sections have different Schedule Numbers, so if you neglect to register for a discussion section, you **WILL NOT** automatically be assigned into one. You are free to attend any discussion sections, even those you are not registered for. What gets done in the discussion sections is driven by what the students want to do.
- WebCT will be used as the online course enhancement tool. You will learn how to access its website at the time you register. Optional problems will be enumerated on WebCT and from time to time, I will post supplementary files and notes there. You are responsible to check your grades (Homework and Exams) on a regular bases and point out any unlikely errors before the end of the term.

COMPOSITION OF THE FINAL GRADE

- Each homework problem will be scored from 0 to 10 points. Homework is worth **20%** of your final grade.
- Exams 1, 2, and 3 will each be worth **20%** of the final grade. Exams will cover material either since the start of the semester (Exam 1), or since the most recent exam (Exams 2 and 3).
- The final exam will count **20%** of the final grade and will be cumulative from the beginning of the semester. The final will be mainly aimed at material since Exams 3 but I will pick and choose prior material to round out a final.
- *I don't assign letter grades to individual exam or homework grades.* I assign letter grades *only* at the end of the semester using following overall guideline:

Threshold (%)	93	90	87	83	80	77	73	70	67	63	60	<60
Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F