

Jean

PHYSICS 241, Spring 1998, Professor Bernice Durand

COURSE INFORMATION

COURSE: Introduction to Modern Physics, lectures MWF 8:50, 1313 Sterling; discussions Tues 1:20 or 2:25, 3331 Sterling.

ATTENDANCE POLICY: I expect you to come to every lecture and to a discussion every week, preferably at the same time each week. Try hard to be on time to class! Part of your grade will be earned in discussion. If you know in advance you can't get to class, please email or call me.

TEXT: *Elementary Modern Physics*, Paul A. Tipler, Worth Publishers 1992, selected for its clarity, thinness, and good illustrations.

INSTRUCTOR: Prof. Bernice Durand, 4205 Chamberlin, office hours below, 262-3827, bdurand@theory3.physics.wisc.edu. I will tell you if I get the course information onto a web site.

GOALS: We will master the text, which is a superb introduction to 20th century physics and very up-to-date; and we'll have guests in to speak or else take a field trip at the ends of Chs 4-9, to see something we've learned about being applied in current research. We will work in groups a great deal, including some group homework and one group small research project related to a guest's research.

GRADE: Two hour exams on three chapters each will count 10% each. The third two-hour exam on three chapters plus cumulative will count 20%. Nine homework assignments will total 40 problems, counting on the average 1% each. A grader will grade the homeworks. The remaining 20% will come from a small group project 5%, and discussion handins and quizzes 15%, roughly 1% each week. My usual grade expectations, adjustable if necessary, are A 90-100, AB 87-89, B 75-86, BC 72-74, C 60-71, D 50-59. I have no preconceptions as to how many of each grade I will give. Please all earn A's!!

FORMAT: The course schedule shows how I hope to cover the text material. I expect you to have read the relevant sections before the lecture. Each lecture covers 8-9 pages on average, except our six guest speaker days we may not get any text covered and have to cram the next couple of times. I like class participation, so don't be shy!

In discussions, you will ask questions about lectures, text, homework, then do some group problem-solving to be handed in and checked, winding up with a 5-10 minute quiz to be graded individually. The group work you do will prepare you for the quiz. As part of each chapter's assignment, I'll list some problems to look at before discussion. I will try to select discussion and quiz questions to coordinate with homework questions.

Homework will be assigned on Wednesdays, in the first lecture on each chapter, and due on Wednesdays in the first lecture on the next chapter. I'll try to get the grader to have them back promptly. Some of them will be turned in as a group, with all group members getting the same grade. You will be assigned to your groups, which will rotate during the semester.

I will try to construct the exams the way I liked exams as a student: 60% like homework, 20% like lecture or text, 20% something new which is challenging but doable.

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COURSE SCHEDULE

WEEK	MONDAY	TUESDAY	WEDNESDAY	FRIDAY
1	Jan 19 No class	Jan 20 Startup	Jan 21 Secs 1.1-1.2	Jan 23 Sec 1.2
2	Jan 26 Secs 1.3-1.5	Jan 27 Secs 1.1-1.5	Jan 28 Secs 1.6-1.8	Jan 30 Secs 1.9-1.10
3	Feb 2 Sec 1.11	Feb 3 Sec 1.6-1.11	Feb 4 Secs 2.1-2.2 Homework 1 due	Feb 6 Secs 2.3-2.5
4	Feb 9 Secs 2.5-2.6	Feb 10 Secs 2.1-2.6	Feb 11 Secs 3.1-3.2, App B Homework 2 due	Feb 12 Secs 3.3-3.6
5	Feb 16 Sec 3.7	Feb 17 Secs 3.1-3.7, App B	Feb 18 Secs 3.8-3.9	Feb 20 Sec 3.10
6	Feb 23 Sec 3.11	Feb 24 Secs 3.8-3.11	Feb 25 Secs 4.1-4.2 Homework 3 due	Feb 27 Sec 4.2
7	Mar 2 Secs 4.3-4.4	Mar 3 Secs 4.1-4.4	Mar 4 Exam over Chs 1-3	Mar 6 Secs 4.5-4.6
Spring Recess March 7-15	X	X	X	X
8	Mar 16 Secs 4.7-4.9	Mar 17 Secs 4.5-4.9	Mar 18 Guest, Sec 5.1 Homework 4 due	Mar 20 Secs 5.2-5.3
9	Mar 23 Sec 5.3	Mar 24 Secs 5.1-5.3	Mar 25 Guest, Secs 6.1-6.2 Homework 5 due	Mar 27 Sec 6.2, App C
10	Mar 30 Sec 6.3	Mar 31 Secs 6.1-6.3, App C	Apr 1 Secs 6.4-6.5	Apr 3 Secs 6.6-6.7
11	Apr 6 Sec 6.8	Apr 7 Secs 6.4-6.8	Apr 8 Guest, Secs 7.1-7.2 Homework 6 due	Apr 10 No Class
12	Apr 13 Secs 7.3-7.4	Apr 14 Secs 7.1-7.4	Apr 15 Exam over Chs 4-6	Apr 17 Sec 7.5
13	Apr 20 Sec 7.6	Apr 21 Secs 7.5-7.6	Apr 22 Guest, Secs 8.1-8.3 Homework 7 due	Apr 24 Secs 8.4-8.5
14	Apr 27 Secs 8.6-8.8	Apr 28 Secs 8.1-8.8	Apr 29 Guest, Secs 9.1-9.2 Homework 8 due	May 1 Secs 9.3-9.5
15	May 4 Secs 9.6-9.7	May 5 Secs 9.1-9.7	May 6 Guest, Sec 9.8 Homework 9 due	X Study Day
16	X	May 12, 1:20? Review Session	May 13, 2:45 Exam over Chs 7-9 plus cumulative	X