Physics for Scientists & Engineers III Syllabus

Course:	PHY 112		
Instructor	Dr. N. Christensen		
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Phone:	(309)438-5502		
Office:	MLT 312D		
Office Hours:	Right after class (except Friday) or by appointment		
WebAssign:	https://www.webassign.net Course key: ilstu 9397 1973		
Lecture:	MWF 1:00-1:50 in MLT 309		
Lab:	R 1:00-3:50 Computer Labs in MLT 309 Experimental Labs in MLT 217		
Required Materials:	WebAssign access with <i>included</i> textbook. Textbook: Physics for Scientists and Engineers, 9th Edition including the Modern Physics chapters through chapter 46.		
Homework:	On WebAssign Due at the beginning of each class period		
Exams:	2 Midterms and 1 Comprehensive Final		

WebAssign

Both the textbook and all homework will be done on WebAssign. You will need access to WebAssign immediately. Your first WebAssign homework assignment is due at the very next class. So, don't wait. Many of you already have "lifetime" access. When you go to the WebAssign website to register, you will click on the button that says "I have a class key" and enter "ilstu 9397 1973". This will give you access to the course materials and assignments.

Doing homework online has certain benefits to the student. The homework software will give immediate feedback. This will include whether the question was answered correctly. In some cases, it will also give guidance for what the student may have done wrong. Additionally, the student will have multiple attempts to answer the problem, each time with different numerical values. Working on the homework until mastery is achieved is one of the best ways to prepare for the exams.

Your textbook will be accessible on WebAssign. You do not need to purchase a separate print copy of your textbook. An electronic version comes with WebAssign. (If you are registering for WebAssign for the first time, you need to select the option to include the textbook.)

Grading

Your grade will be based on exams, homework and laboratories in the following proportions:

60% Exams (20% for each of MT I, MT II and Final)

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20% Homework
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20% Labs (2% for each of 10 labs)

Your letter grade will be determined according to the following percentages of the total possible scores:

85% A 70% B

60% C

50% D

You are required to complete all assignments and laboratories and to attend all exams. Only very good and documented excuses will be allowed for missing exams. You must discuss this with the instructor as soon as possible.

Homework

A combination of continuously reading the textbook for understanding and doing a lot of homework problems is the best way to master the material in this course and therefore do well on the exams. In order to ensure your success, you will have homework assignments due at the beginning of every class period. The majority of the problems will be based on material we have already covered in class. There may also be a small number of "prelecture exploration" problems that help you start thinking about the material before it is covered in class. Furthermore, there may be a small number of problems from previous chapters to help you keep up on the cumulative material and do well on the exams.

Discussing homework problems with other students is ok, even good if you are stumped. But, remember that it is up to you to make sure you master each problem so that you will do well on the exams (you can not get help on the exams). You can do each problem multiple times. Only your best score (before the due date) is used for your grade. So, if you don't feel confident in a problem, do it again with new numerical values. There is nothing to lose in doing the homework problems multiple times.

Exams

All the exams will be comprehensive. The first exam will cover Chapters 19-22. The second exam will mainly cover Chapters 39-42 with a small number of questions from Chapters 19-22. The final exam will mainly cover Chapters 43-46 with a smaller number of questions from Chapters 19-22 and 39-42. The majority of the exam questions will come from the book. They may have appeared on homework, but not necessarily. There may also be some questions based on the laboratories.

Laboratories

There will be two types of laboratories. Computational physics laboratories will be done in MLT 309 (the same room as the lectures) while experimental labs will be done in MLT 217. There will be 5 of each type. For credit, you must attend the laboratory, complete the work and turn in a lab report by the beginning of the next laboratory period. The final laboratory will be due by the final day of class, Dec. 5. Exceptions must be discussed with the instructor in advance. Late laboratories will be docked 10% per late calendar day (whether we meet or not). Details on grading will be given at the first laboratory.

Tentative Schedule

	Monday 1:00-1:50	Wednesday 1:00-1:50	Thursday 1:00-3:50	Friday 1:00-1:50
Week 1 Aug. 18-22	Ch. 19	Ch. 19	CL 1	Ch. 19
Week 2 Aug. 25-29	Ch. 20	Ch. 20	CL 2	Ch. 20
Week 3 Sept. 1-5	Labor Day	Ch. 21	EL 1	Ch. 21
Week 4 Sept. 8-12	Ch. 21	Ch. 22	CL 3	Ch. 22
Week 5 Sept. 15-19	Ch. 22	Flex/Review	Exam 1	Review
Week 6 Sept. 22-26	Ch. 39	Ch. 39	EL 2	Ch. 39
Week 7 Sept. 29-Oct. 3	Ch. 40	Ch. 40	EL 3	Ch. 40
Week 8 Oct. 6-10	Ch. 41	Ch. 41	EL 4	Ch. 41
Week 9 Oct. 13-17	Ch. 42	Ch. 42	Ch. 42	Flex/Review
Week 10 Oct. 20-24	Flex/Review	Flex/Review	Exam 2	Review
Week 11 Oct. 27-31	Ch. 43	Ch. 43	CL 4	CH. 43
Week 12 Nov. 3-7	Ch. 44	Ch. 44	CL 5	Ch. 44
Week 13 Nov. 10-14	Ch. 45	Ch. 45	EL 5	Ch. 45
Week 14 Nov. 17-21	Ch. 46	Ch. 46	Ch. 46	Flex/Review
Nov. 24-28	Thanksgiving Break			
Week 15 Dec. 1-5	Flex/Review	Flex/Review	Flex/Review	Flex/Review
Dec. 8-17	Finals Week			

All dates are tentative. The Flex/Review dates are first used to complete material not already finished. Once all material for the unit is finished, flex days will be used to review for the exams.

Homework will still be due on these days whether the unit material is finished or not. CL and EL stand for computational laboratory and experimental laboratory, respectively.

Academic Integrity

Although it is ok to discuss certain aspects of this course with other students, the final work on all assignments and exams must be your own. Homework and laboratories can be done in groups according to class policies but the final homework input and submission using WebAssign and the final lab report must be the work of the student claiming credit for it. Additionally, exams must be done by the student alone and with no help from anyone other than the instructor. Any violations will be dealt with according to university policy.

Disability

Any student needing to arrange a reasonable accommodation for a documented disability should contact Disability Concerns at 350 Fell Hall, (309)438-5853, on the web at DisabilityConcerns.IllinoisState.edu.

Counseling

Life at college can get very complicated. Students sometimes feel overwhelmed, lost, experience anxiety or depression, stubble with relationship difficulties or diminished self-esteem. However, many of these issues can be effectively addressed with a little help. Student Counseling Services (SCS) helps students cope with difficult emotions and life stressors. Student Counseling Services is staffed by experienced, professional psychologists and counselors, who are attuned to the needs of college students. The services are FREE and completely confidential. Find out more at Counseling.IllinoisState.edu or by calling (309) 438-3655.

Absence Due to Bereavement

Students are eligible for up to five (5) consecutive days (not including weekends or holidays) of excused absence in the event of a death of a spouse, domestic partner, parent, child, grandparents, grandchild or sibling, uncle, aunt, niece, nephew, first cousin, in-law, or step-relative. The student is responsible for notifying the Dean of Students Office (DoS) **prior** to their absence. The DoS will communicate the absence and bereavement policy to the student's course instructors. Upon receiving proper documentation regarding the death and relationship, the DoS will provide this documentation to each of the course instructors, if requested. Upon notification of the absence and provide an opportunity to complete missed exams, quizzes and other required work. Ultimately, the student is responsible for all material covered in class and must work with each individual professor as soon as they return to complete any required work. In the event that a death occurs to a family member or friend that is not specifically covered by the policy, students can communicate the circumstances to the DoS to determine on a case by case basis if it is covered by this policy: (http://policy.illinoisstate.edu/students/2-1-27.shtml) Contact us at (309) 438-2008 if you would like to make use of either of these services.