

General Physics I: PHY111/185

Dr. Michael Tammaro, 874-2079, tammaro@uri.edu, EAST 312

Dr. Michael Antosh, 874-2048, mantosh@uri.edu, EAST 210

TEXT: College Physics, by Michael Tammaro (John Wiley and Sons)

COURSE CONTENT: Chapters 0-15

PHY111 is the first semester of a two-semester sequence in general physics without calculus. Topics include kinematics, Newton's laws, work and energy, energy conservation, momentum and momentum conservation, rotational kinematics and dynamics, gravity, oscillations, fluids, and thermal physics.

WileyPlus: Both the e-book and the homework are administered through the WileyPlus online system. Use the information on the last page of this document to create your account.

TEXT: College Physics, by Michael Tammaro (John Wiley and Sons). The text contains embedded questions. The embedded questions do not count toward your grade, but you should complete them as a means to gauge your competence in answering questions about concepts and solving problems.

Serious students will prepare for the homework assignments by first reading the text and studying the examples and embedded questions. Spending 3-6 hours studying in this way *before* starting the homework assignments is the best approach.

HOMEWORK: Homework is administered through the WileyPLUS online system.

There are 13 mandatory homework assignments corresponding to Chapters 1-13, plus two optional assignments corresponding to Chapters 14 and 15. The optional assignments may be completed to replace lower scores of any of the mandatory assignments. (Essentially there are 15 assignments, and your best 13 count toward your homework score.)

EXAMS: During the exams you are allowed to use an exam resources booklet, a calculator, and something to write with. The exam resources booklet will be provided to you at each exam. Exams will be take place at 10:00 a.m. on the day on which they are scheduled. The 10:00 section of lab will meet at 8:00 a.m. on exam days.

GROUP WORK: Each class concludes with 30 minutes of group work, in which students work on problems in groups of three or four.

CLASS STRUCTURE: On exam days, the only activity is taking the exam. The schedule on all other days, however, is as follows:

8:00-9:15: Lecture

9:15-9:45: Group problem solving

GRADES: 94-100 A, 90-94A-, 87-90 B+, 83-87 B, 80-83 B-, 77-80 C+, 73-77 C, 70-73 C-, 65-70 D+, 60-65 D, <60 F

GRADING: Exams 70%, Group Work 10%, Homework 20%

Use of Cell Phones or Computers: Use of cell phones or computers is not allowed in class, lab, or group problem-solving activities. Put your phone away. Keep it away.

week	M	T	W	R	F	S	S
5/21-5/27	Ch1/2	Ch2 Lab #1 (Ch1 HW)	Ch2/3	Ch3 Lab #2 (Ch2 HW)			(Ch3 HW)
5/28-6/3		Ch4 Lab #3	Ch4	EXAM #1 Chs1,2,3 Lab #4	Ch5 (Ch4 HW)		(Ch5 HW)
6/4-6/10	Ch6	Ch7 Lab #5 (Ch6 HW)	Ch7/8	EXAM#2 Chs4,5,6 Lab #6			(Ch7 HW)
6/11-6/17	Ch8/9	Ch9 Lab #7 (Ch8 HW)	Ch10 (CH9 HW)	EXAM #3 Chs 7,8,9 Lab #8			(Ch10 HW)
6/18-6/24	Ch11	Ch12 Lab#9 (Ch11 HW)	Ch13 (Ch12 HW)	EXAM #4 Chs 10,11,12 (Ch13 HW)	(Ch14 HW) (Ch15 HW)		

ABOUT PHY111/185 at URI: PHY111/185 satisfies a general education elective satisfying the A1 and B3 learning outcomes.

A1: Understand and apply theories and methods of the science, technology, engineering, and mathematical (STEM) disciplines. At the end of the semester, the student will be able to...

- Identify terminology, facts, definitions, and laws and relate them to physical situations
- Identify the key physics concepts and equations necessary that pertain to particular physics problems
- Identify the required input data necessary to solve physics problems
- Apply mathematical methods to the physical concepts in order to perform the necessary steps in the solution of the problem
- Be able to describe the problem, solution strategy and the meaning of the result in a cohesive presentation

B3: Apply the appropriate mathematical, statistical, or computational strategies to problem solving. At the end of the semester, the student will be able to...

- Identify the key physics concepts and required input data necessary to solve physics problems
- Be able to demonstrate their understanding of the concepts by designing problem solving strategies.
- Be able to apply mathematical methods to the physical concepts in order to perform the necessary steps in the solution of the problem
- Be able to evaluate problem answers to see if the numerical values are reasonable, and within expected bounds
- Be able to describe the problem solution strategy
- Be able to describe the problem solution
- Be able to describe meaning of the result

PHY185 Lab Guide

Lab Manual: The Physics 185 Laboratory Manual may be purchased from the bookstore. You must bring the manual to lab each meeting.

Content: Phy185 consists of 9 experiments. **All experiments are to be recorded in a permanently bound notebook.** You will not get credit for labs that are not recorded in a permanently bound notebook. Your name should appear on the cover of the notebook and on the first page of every lab report.

Lab Reports: Lab reports must be finished during the lab period. Do not take your notebook from the lab. If you cannot finish the lab report during the lab period you will be graded on what you were able to finish. If you copy the work of your lab partner in any way you may get a zero for that lab. Each lab report will contain four sections. Each section must be labeled and completed.

TITLE: State the title of the experiment, date of the experiment, your name, **and the names of your lab partners.**

NOTES: While doing the experiment, use this section to make notes, perform calculations, and record your data. If you need to make graphs, they should appear in this section. Only after completing the lab should you continue with the rest of the lab report. Use the lab manual as your guide while doing this section.

PURPOSE: What was the purpose of the lab? What were you trying to measure? Briefly describe the experimental procedure.

RESULTS: State your results and include a calculation of the % error (if applicable).

Grades: 94-100 A, 90-94A-, 87-90 B+, 83-87 B, 80-83 B-, 77-80 C+, 73-77 C, 70-73 C-, 65-70 D+, 60-65 D, <60 F

Missed Labs: In the event that you miss a lab because of an emergency, and provide documentation, I will provide a means to make up a missed lab.

Lab Partners: You can work in groups **of three or less.** More than three people at a table is not permitted.

LAB EXPERIMENTS

Tuesday 5/22	Lab #1: Measurement
Thursday 5/24	Lab #2: Free Fall
Tuesday 5/29	Lab #3: Projectile Motion
Thursday 5/31	Lab #4: Friction and Inclined Plane
Tuesday 6/5	Lab #5: Circular Motion
Thursday 6/7	Lab #6: Momentum
Tuesday 6/12	Lab #7: Ballistic Pendulum
Thursday 6/14	Lab #8: Torque
Tuesday 6/19	Lab #9: Simple Harmonic Motion and Hooke's Law