PHYS 185 – College Physics I
Syllabus

Fall 2009 – Sections 3 and 4

Modified: September 18, 2009

INSTRUCTOR Dr. Eduardo Sánchez Velasco.

OFFICE

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Note: Do not use the phone or e-mail for grade related questions.

OFFICE HOURS

Monday, Friday : 2:30 p.m. – 3:30 p.m.
Wednesday: 12:30 p.m. – 1:30 p.m. and 2:30 p.m. – 3:30 p.m.
Thursday: 1:30 p.m. – 2:30 p.m.

These are my official office hours, but frequently I am in my office at other times; you should feel free to stop by at any time, or to make an appointment, if this is more convenient.

CLASS HOURS

LECTURE: Monday, Wednesday and Friday, 1:30 p.m. – 2:20 p.m. in Magruder Hall 1096.
LAB Section 3: Tuesday, 11:00 a.m. – 12:50 p.m. in Magruder Hall 1002.
LAB Section 4: Tuesday, 1:30 p.m. – 3:20 p.m. in Magruder Hall 1002.

CATALOG DESCRIPTION

Phys 185 starts a broad survey of physics. While it does not rely on calculus, it does require a solid understanding of algebra and trigonometry. Both the lectures and the labs will deal with abstract problem solving. The labs emphasize using mathematics to explain the experiments performed; the lectures acquaint you with basic concepts in mechanics and thermodynamics. You will also use graphs to help you interpret data and visualize concepts. This course involves a fair amount of homework and individual study of the textbook. Physics is notorious in that you might think you grasp the concepts, but often discover otherwise when confronted with a problem you have to solve. Much of your learning will come about as you solve problems, not just read the text! You will work (and be graded) both individually and as part of your lab group.

The official information goes as follows:

> *The motion of objects, from particles to planets, is the focus of this course. The revolution in human understanding of mechanics, inspired by Galileo and developed by Newton and others is the lens through which our modern mechanical world is surveyed. Students will make extensive use of algebra and trigonometry in applying the fundamental laws of classical physics to real-world problems, and will explore the physicists approach to inquiry through laboratory investigations.*

Credits: 4 hours. **Prerequisite**: MATH 186 [Elementary Functions] or equivalent.
NOTES: General Honors Course. This course counts towards the Scientific-Physical Science Mode of Inquiry of the Liberal Studies Program, and towards the 63-hours Liberal Arts and Sciences graduation requirement.

TEXT AND MATERIALS

The required text for this course is:

• **College Physics. A Strategic Approach**, by Randall D. Knight, Brian Jones, and Stuart Field, Addison Wesley-Pearson, 2007, including access to **Mastering Physics**, the online tutorial and homework system that is associated with the textbook.

☞ In addition every student **MUST** bring to every lab and exam a **scientific calculator**, and to be familiar with its use. You should also bring to the labs and lab exams a **metric ruler**.

ACADEMIC DISHONESTY

Academic dishonesty of any form will not be tolerated in this class. Anyone caught cheating on a test, homework or lab will automatically receive a grade of zero on that test, homework or lab. Further disciplinary action consistent with University policy will be considered, including failing the course. Homework and exams, unless instructed otherwise, must be done individually. For more information about the University policy on academic dishonesty, consult the appropriate sections of the Student Conduct Code (see the code and related information at `http://conduct.truman.edu`).

STUDENTS WITH DISABILITIES

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Disability Services office (x4478) as soon as possible.

EXAMS

There will be four closed book exams and two lab exams in this class. The tentative exam dates are listed at the end of this syllabus. All exams, **including the final** (exam #4), will be on the material covered since the preceding test. That is, they are not "comprehensive". However, you may have to use as background for one exam some material covered in previous exams. Lab exams will cover material from the lab sessions. In exams it will be expected a deep knowledge of the material. Having only a general understanding of the material without a knowledge of the relevant details will not be enough. Remember that all exams, unless instructed otherwise, are without books or notes, and must be done individually. You must bring a scientific calculator to the exams, and be familiar with its use.

HOMEWORK ASSIGNMENTS

There will be homework assignments that you will do online, using the **Mastering Physics** system. New copies of the textbook include a registration code for the Mastering Physics system. If you have a used copy of the book, you will have to purchase that code at the time or registering in the system. I will give you instructions of how to register in the Mastering Physics system. Homework assignments MUST be done individually; it will be considered academic dishonesty if you do not do them individually. The homework assignments will get you started practicing the concepts learned in the course, but you should do much more than these homework assignments if you want to understand well the material, and prepare yourself for the exams. The end of the book contains a huge amount of questions and problems, many of them with solutions at the end of the book. After studying the lectures and the textbook, you should do as many problems and questions as you can, to make sure you understand the material, and to develop the high degree of proficiency with the material that will be assumed in the exams.

Try to familiarize yourself well with the Mastering Physics system. Sometimes the system is a little bit inflexible on the answer it is expecting, and you will be penalized for not following the rules. Make a serious effort to understand the problems and make sure that you give accurate answers without too much rounding errors. In many cases, it is a good idea to work the problem in paper

before you type the answers in the computer. Also, remember that **no late homework will be allowed**, so make sure you do it before the deadline, or you will get zero in the questions you do not do.

MISSING A TEST, HOMEWORK, LAB OR CLASS

Students are expected to attend all class sessions and labs. If you have a valid conflict that does not allow you to take an exam, do a homework assignment, or to be at the lab at the scheduled time, **contact me as soon as possible**, preferably before the event takes place. In any case you should see me **in person** as soon as possible. Missing a test, homework, or a lab requires a valid excuse, otherwise a grade of zero will be assigned. I reserve the right to determine what is, and is not, a valid excuse. As a rule only extreme situations, such as serious medical problems, will be considered valid excuses. Field trips and sport events are not usually considered valid excuses unless previously arranged personally with me. In general, having other exams in the same day is not a valid excuse. Adjustments to make up missed exams, homework, or labs, if any, will be made at my discretion, and only in extreme situations.

It is your responsibility to be on time for all classes, labs and exams. Alarm clock malfunctions and similar events are NOT considered valid excuses for being late or absent. If you are late to a lab you may not be allowed to do it. Being late to an exam may disqualify you from taking that exam. DO NOT BE LATE!. You should also know the dates and content of the exams. "I did not know there was a exam today" is NOT a valid excuse for missing a exam. It is your responsibility to know if there is a changes of date, time or content of an exam.

In most lab meetings there will be lab activities that will count towards the grade. Of course, you have to be in the lab **on time** to get a grade in that lab. In general, lab makeups will not be given. If you miss a lab due to unusual circumstances, please see me **as soon as possible**. Unless other arrangements have been made, any missed lab will be counted as zero. However, I will throw away the worst lab when computing the final grade. Therefore, you can safely miss one lab for whatever reason without damaging your grade. Use it as a sick leave day, and make sure you do not miss more than one lab. This throwaway policy only applies to labs; it does NOT apply to exams or homework.

GRADING POLICY

The grade for this class will be obtained from the four class exams, the two lab exams, lab activities, and from homework assignments. Each class exam will count 15% towards the final grade, lab activities (with the worst one thrown away) 20%, each lab exam 5%, and the remaining 10% comes from the homework assignments. You MUST keep all graded materials, and be able to produce them in case of grade disputes.

Exam #1	15%
Exam #2	15%
Exam #3	15%
Exam #4	15%
Lab activities	20%
Lab exam #1	5%
Lab exam #2	5%
Homework	10%
Total :	100%

The minimum guaranteed grading scale is as follows:

Final Percentage	Final Letter Grade
85 to 100	A
70 to 85	B
60 to 70	C
50 to 60	D
below 50	F

Final letter grades are normally assigned according to the table above. However, at the end of the semester I may curve grades upward. If this curving is done and, for example, I add 1% to the all the final grades, a person with a final percentage of 69% may receive a B as the final letter grade, even though the above table indicates that a C would normally be assigned. However, **curving is not guaranteed, and you should not count on it**. I will never curve downward. As a rule, only the grades in the above table (A, B, C, D or F) will be given. Any other grade, like incomplete (IC), will be given at my discretion, and only under **very unusual and extreme circumstances**, like a serious medical problem. Poor performance will not qualify you for a grade other than A, B, C, D, or F.

TENTATIVE EXAM DATES

Exam #1: Wednesday, September 23 in class.
Exam #2: Wednesday, October 21 in class.
Exam #3: Wednesday, November 11 in class.
Exam #4: Tuesday, December 15, 1:30 p.m. − 3:20 p.m. (Finals week).

Lab exam #1: Tuesday, October 13 in the lab.
Lab exam #2: Tuesday, December 8 in the lab.

☞ This syllabus may change during the semester. Updated versions of this syllabus will be posted on line at `http://www2.truman.edu/~velasco`