Syllabus   **Phys 172**   Spring Semester 2019
College Physics II

Professor: Wilfred Hok Kong LEE, Ph.D.

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Contact Info:
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Office Hours:
        Mon   11:45 – 1:15
        Wed   11:45 – 1:15
        Thu   11:45 – 12:45

Important Dates:
        Last Day to Add   Feb 10
        Last day to drop without a W   Feb 10
        Last day to drop and receive a W   Apr 27

Misc Info:
        WebAssign class key: swccd 6434 6163
        Midterm   Ch 16-20   April 4 (Thu, may change)
        Final   All Chapters   May 21 (Tue) 8:10 – 10:10

Textbooks:
Required: *Principles of Physics with WebAssign (5th edition), by Serway and Jewett, Published By Brooks/Cole*

Course Homepage:
The main course website will be http:/dept.swccd.edu/hlee, where you will find the syllabus, lecture notes, and tutorial videos and homework solutions.

Homework (WebAssign):
For homework we will be using the WebAssign program online http://www.webassign.net/. You have up to 4 attempts per question. Your work will be graded automatically and posted online. Detail for how to log onto WebAssign is in a separate handout. Class key for this semester is listed above, you will need this when you log in for the first time.

As of Jan 2018, the cost for the WebAssign + eBook access code is about $125 for multi-term "Life of Edition" (LOE) access. The access code is good for any courses that use the same edition of the textbook. For single term access (not LOE) it is $100. The price may vary from year to year.

Other Useful sites:
http://dept.swccd.edu/hlee (My SWC page)
http://www.webassign.net/ (WebAssign – Homework)
http://phet.colorado.edu/ (Physics Education Technology)

Prerequisite: PHYS 170 and MATH 122 or equivalent

Course Description:

3 Units. Second of a three-semester, calculus-based sequence intended mainly for majors in the life sciences. Topics include: electric fields; direct current; alternating current; magnetic fields; thermal physics (Ch 16 to 23 of the textbook). In addition, brief introduction will be given on optics and modern physics (Ch 9, 24-28 of the textbook). These additional topics will be covered in depth in PHYS 174 and 175. See course outline below.

Course Objectives:

To prepare you to become a scientist and to get you one step closer to your degree. Passing this class indicates the ability to understand and apply the concepts in this course to various physics problems. Your performance will be measured based on the conceptual understanding as well as the ability to use mathematics to state and solve problems.

Tentative Course Outline:

Ch 16	Temperature and the Kinetic Theory of Gases
Ch 17	The First Law of Thermodynamics
Ch 18	The Second Law of Thermodynamics
Ch 19	Electric Forces and Electric Fields
Ch 20	Electric Potential and Capacitance
Ch 21	Current and Direct Current Circuits
Ch 22	Magnetic Forces and Magnetic Fields
Ch 23	Faraday's Law and Inductance
Ch 24-27	Introduction to Selected Topics: Electromagnetic Waves, Optics
Ch 9, 28	Introduction to Selected Topics: Modern Physics

Grading:

Your final course letter grade will be based on your overall score. Individual letter grades will not be formally assigned to exams. Letter grade will be determined approximately as follows:

100 – 85%	A
84 – 75%	B
74 – 60%	C
59 – 50%	D
49 – 0%	F

Note that the above scale is only an approximation and may be revised near the end of the semester.

Evaluation:

The overall grade will be determined by your performance in the mid-term exam, final exam, quizzes and homework. They carry different weight in computing your overall grade, as summarized below:

Homework: 10%
Quizzes: 20%
Midterm Exam: 30%
Final Exam: 40%

Homework:
Some of the homework problems will become questions on the exams. You will not know which homework questions will show up on an exam until you take the exam, so you must do all homework questions to properly prepare for the exams. Late homework will receive zero points. Being too busy is <u>not</u> an acceptable excuse for handing in homework late.

Quizzes:
There will be a quiz every two to three chapters. The exact time will be announced in advance. If you cannot make it to class you will receive zero points unless you contact me <u>*in advance*</u> to arrange for a make up quiz.

Midterm and final exam:
Mid-term will cover roughly the materials from the first half of the course, while the final exam will cover the entire semester. Many of the exam questions will be from the homework problems, but I may include a few questions from elsewhere. If you cannot make it to the exams you will receive zero points unless you contact me <u>*in advance*</u> to arrange for a make up exam.

Student Learning Outcomes:

Students will analyze observations from different physical situations and recognize the underlying laws of physics that govern wide-ranging phenomena seen in nature.

Students will formulate and analyze physics problems mathematically by translating words into mathematical equations and find the quantitative solutions.

General Policy:

For information regarding attendance, classroom policy, misconduct and tutorial services please refer to the syllabus addendum on the course website.

Disclaimer:

The content of this syllabus or course outline may change during the semester. It is your responsibility to keep track of the changes.