Professor: Wilfred Hok Kong LEE, Ph.D.

Office: 343A  Classroom: 341  Mail box: MSE Office 215

Contact Info:
Email: hlee@swccd.edu
Phone: ext. 5533

Office Hours:
Mon  11:40 – 1:10
Wed  11:40 – 1:10
Thu  11:40 – 12:40

Important Dates:
Last Day to Add  Sept 3
Last day to drop without a W  Sept 3
Last day to drop and receive a W  Nov 9

Misc Info:
MasteringPhysics course ID: FA18PHYS270
Midterm  Ch 1-7  Oct 31 (Wed, may change)
Final  Ch 1-11, 13-14  Dec 3 (Mon) 10:40 – 12:40

Textbooks:
Required: University Physics with Modern Physics with MasteringPhysics™, (14th edition)
by Young and Freedman

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 (MasteringPhysics):
For homework we will be using the Mastering Physics program online
http://www.masteringphysics.com/. You have up to 4 attempts per question. Your work
will be graded automatically and posted online. Detail for how to log onto Mastering
Physics is in a separate handout. You will need the course ID given above.

The pricing is for MasteringPhysics $115.95 with the e-book option and $68.95 without
(as of Jan 2017), the subscription is good for two years. If you purchase the e-book then
you do not need to buy a physical copy of the textbook. However, you should also keep in
mind that the e-book cannot be resold to someone else, and you will not be able to
access the e-book once your access code expires after two years. Here is the publisher’s
link:
http://www.mypearsonstore.com
Fundamentals of Physics I

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

Prerequisite: MATH 250, or equivalent.

Course Description:

3 Units. The course is the first of a three-semester, calculus-based sequence intended mainly for majors in the physical sciences and engineering. It covers mechanics, basically Ch 1-11, 13-14 of Young & Freedman. (Ch 12 Fluid Mechanics will be covered in PHYS 272) 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 1 | Vectors     |
| Ch 2 | Motion along a Straight Line |
| Ch 3 | Motion in Two or Three Dimensions |
| Ch 4 | Newton’s Laws of Motion |
| Ch 5 | Applying Newton’s Laws |
| Ch 6 | Work and Kinetic Energy |
| Ch 7 | Potential Energy and Energy Conservation |
| Ch 8 | Momentum, impulse, and Collisions |
| Ch 9 | Rotation of Rigid Bodies |
| Ch 10 | Dynamics of Rotational Motion |
| Ch 11 | Equilibrium and Elasticity |
| Ch 13 | Gravitation |
| Ch 14 | Periodic Motion |

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: 10%
Mid-term Exam: 40%
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 not an acceptable excuse for handing in homework late.

Quizzes:
Most weeks I reserve about 20 minutes of time in the class for quizzes, the exact time will be announced in advance. If you cannot make it to class you will receive zero points unless you contact me in advance to arrange for a make up quiz.

Mid-term 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 in advance 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.