**PHY 131 (Hemmick) – syllabus**

**(in-person and on-line)**

**NOTE:** Information in this syllabus should be considered as “preliminary”. All students are responsible for changes announced in lecture and via class Email/blackboard.

**Course Organization**

The course is comprised of two main divisions: Lecture and Recitation. Lectures are meetings of the entire “in-person” class. Recitations are meetings with faculty in groups of ~35 students or less. Both portions are required and make contributions toward the final class grade. There is additionally an online version of the class. Online students receive lecture and recitation via recordings of the live class(es). Laboratory is an entirely separate class.

**Lecture**

Attendance is required and enforced by “clicking in”. Online students receive a special “punctuated echo” recording that replaces the “clicker” questions with browser-based responses.

**Recitation**

Because the class has so many students, it is difficult for students to receive individual attention during the main lecture. For this reason, the course is additionally divided into recitation sections. Recitation sections are typically focused upon helping students to understand and complete that week's homework assignment. Recitations are taught by faculty members. During a recitation meeting, it is possible that a quiz, additional homework, or some other instrument used to determine the student's recitation grade will be assigned and/or collected.

**Required Material**

1. Textbook: Katz available here: http://services.cengagebrain.com/course/site.html?id=1901050.

2. All Course Information handed out in lecture.

3. A NON-Programmable calculator.

a. Exams allow no formula sheets.

b. Calculator should have:

c. Addition, subtraction, multiplication, division.

d. Trig functions.

e. Log functions.

f. Square root.

g. Calculator must not have ability to store formulas.

h. Practice with your exam calculator even on homework.

4. An account in the WebAssign system (see below).

5. A clicker from the Turning Point Company (for in-class students only)

**Topics:**  motion in one and two dimensions, Newton's laws of motion and gravitation, energy, momentum, angular momentum, rigid body motion, fluids, wave motion, heat, kinetic theory, and thermodynamics

**Grade Determination**

The grades will be calculated based upon the following percentages:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Exam -1 | Exam-2 | Exam –Final | Rec | Homework | Attendance |
| Percentage | 15 | 15 | 30 | 10 | 15 | 15 |

Your final score based upon the weightings listed above will be compared to the following scale to determine the letter grades (*i.e*. there is not a curve):

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | A | A- | B+ | B | B- | C+ | C | C- | D+ | D | F |
| Percentage | 90 - 100 | 85 - 89 | 80 -  84 | 75 -  79 | 70 -  75 | 65 -  69 | 60 -  64 | 55 -59 | 50 –  54 | 45 –  49 | Below 45 |

The grades will be *normalized* between recitation sections. Normalization is not curving since the grades will be brought to the same mean as one another without an overall shift upward or downward.

**Homework**

The homework is electronic using the WebAssign system. Students should not log into the system directly from a web browser, but instead use the Blackboard link for their recitation class. Further details on signing into WebAssign will be given in the first lecture.

**Getting Help**

**Office Hours**

PHY 131 and PHY 132 are indeed difficult courses and most students require help from time to time. The best course of help is to go to the office hours of anyone in the course staff. Everyone in the course (Lecturers, Recitation Instructors and Lab Instructors) hold regular office hours. You can and should go to these office hours when you need help.

**Help Room**

All course members will sit shifts in room A-129 in the physics building. A-129 is the room where you hand in lab reports and it is also known as the Help Room.

**Review Videos**

Review videos are available posted on the course web page. Up to 3% extra credits is available for viewing them all. They are divided into headings by “learning objective” and are not a perfect match to the book (they are better). The videos associated with midterm #1 material must be completed prior to midterm#1 (1% extra credit). The videos associated with midterm#2 material must be completed prior to midterm #2 (1% extra credit). The videos associated with the final exam must be completed prior to the final exam (1% extra credit).

**Review Sessions**

Professor Hemmick has developed a tradition of holding extensive review sessions outside of class. These are typically held in the evenings or weekend before the exam. Typically one 8-hour review is held prior to each midterm and prior to the final. During these reviews, we do physics problems from practice exams (mostly the same material as the review videos) and we make them up on the spot and upon request from any source. The idea is that by the time the review is finished, everyone present should be so thoroughly familiar with the material that the exam will have become easy.

The philosophy is simple. The exams in this course are tough but fair. We will work as hard as necessary so that by the time you take them they will seem easy. High scores on a tough exam is the explicitly stated goal of the instructor and should be the same goal for all students. Scheduling of these reviews will be done in lecture.

**Exams**

Large Classes hold evening exams scheduled by the University, NOT the instructor. Here is a link to the schedule of these so-called “common exams”:

http://www.stonybrook.edu/commcms/registrar/registration/exams.php

**Schedule of Lecture**

The Class Calendar (access through Blackboard) will show a rough outline of which topics will be covered at what time. This schedule shows which chapters/sections of the books should be read to prepare for lecture. The actual schedule may vary somewhat.