Physics 031, Physics for Engineers (91817), Syllabus

Instructor: Professor Junru Wu; Website: www.uvm.edu/~jwu/Wu.html
Cook Building, A526; Phone: 656-8357; email: jwu@uvm.edu.
Office Hour: MW: 8:30 - 10:00 AM; or by appointment.

Lecture: Fundamentals of classical mechanics including oscillations and waves.
12:00 pm - 12:50 pm, MWF, STAFFORD HALL 101

Prerequisites: Math 21.

Laboratory: (W, Cook A409)

You are recommended to take the accompanying optional problem-solving session:
Phys 030 (92095), F, 8:30 – 9:20 AM, ROWELL N/A HLTH 118. It will help you to solve homework problems. TA: Don Ma.

Textbook:

You must have the MasteringPhysics access code for this class!

You can log on to http://www.masteringphysics.com once you have the student access code.
Our course is “Physics 31 Fall 2016 - Wu” and course ID: MPWU12877.
You need to register to that course for our class.

Labs (all in Cook A409):
Please register Lab section as soon as possible. The lab section is a part of the course which provide good opportunities to have hands-on experience. Please follow guidance and rules by your lab instructors. The manual is available online through Blackboard. Please review the write up for the experiment before coming to lab. You must be on time and have good team spirit. Missing a lab results a zero grade; no make-up will be provided.

Lab schedule:
Lab 1: Introduction on 8/31 due on 8/31
Lab 2: Linear kinematics on 9/7
Data analysis on 9/14 due 9/16
Lab 3: Linear dynamics on 9/21
Data analysis on 9/28 due 9/30
Lab 4: The work-kinetic theorem on 10/5
Data analysis on 10/12 due 10/14
Lab 5: Rotational Dynamics on 10/19
Data analysis on 10/26 due 10/28
No lab 11/2
Lab 6: Conservation of Angular Momentum on 11/9
Data analysis on 11/16 due 11/18
No lab on 11/23 (Thanksgiving Break)
Lab 7: Standing Waves on 11/30
Data analysis on 12/7 due 12/9

Lectures:
In lectures, we will concentrate on learning physical concept and problem solving ability. Cell phones should be turned off during lectures.

Exams & Homework assignments.
There are four 50-min exams, all close-booked. Exams are based on homework assignments, examples in lectures, and materials in labs. All relevant formula will be provided for each exam. Homework assignments with deadlines are all posted on course page on MasteringPhysics site. You must finish each assignment before its deadline to get credits. You may try to answer the questions as many as six times. After you complete the assignment, you can’t change the answer anymore. The correct answers of each question will be shown after the deadline. No credit for any attempt after the deadline.

Course Grades:
For each student, a score will be computed based on:
The average of lab reports counts 16%. The average of all homework assignments (MasteringPhysics) together count 16%. Four exams count 68% with each of 17%.

Missing exams:
Missing an exam will result in a score of zero unless the student has a valid excuse as defined below. A student with a valid excuse will not be given a make-up exam. His/her final score will be renormalized.

Excuses:
Circumstances beyond a student's control warrant an absence. Valid excuses for such absences are notes from the academic dean, the attending physician, the team coach, the officiating clergyman, the presiding judge, the arresting officer, the FEMA official etc. Merely being seen by a physician does not constitute a valid excuse neither does an out-of-town wedding.

Exam schedule (subjected to change if needed):
Exam I (chaps 1 - 3): 9/16/16, F, in class.
Exam II (chaps 4 - 7): 10/7/16, F, in class.
Exam IV (12 -14, 20 - 21) : to be decided STAFFO 101
Reading:
You should read the materials in the textbook before the class. The lecture will be more useful if you have also attempted homework problems.

University regulations concerning academic honesty apply to all work in this course.