Physics 012 Syllabus  
Sanghita Sengupta (ssengup1@uvm.edu)

Brief Description:
Algebra-based introductory physics II. Subjects include electricity, magnetism, basic optics and modern physics. Accompanying lab: PHYS 022.

Prerequisites:  
Phys 011 or Phys 031 or equivalent.

Textbook: Title: College Physics, 3rd Ed.; Authors: Randall D. Knight, Brian Jones and Stuart Field. ISBN- 0321994116 MasteringPhysics course title: MPYANG40690. You can login to practice homework assignments. Grades recorded in the site will not count for anything in the class.

Instructor:  
Sanghita Sengupta  
Office: STEM W 209  
Office Hours: TW: 11:20 AM - 12:45 PM or by appointment.

Schedule: Lectures: MTWR 9 - 11:15 AM , Rowell 110

Labs: The lab course (Phys022) is complimentary to this class. It provides the opportunity to gain hands-on experience. It is a stand-alone and independent course of one credit.

Lectures: We will concentrate on introduction and consolidation of physical concepts and strategies of problem solving. We will also work on examples similar to homework assignments. In addition, we will go over key strategies on how to tackle MCAT physics questions in those subjects covered in this class. The order of materials to be covered in the class is not of the same order as that of the textbook. Pay attention to details of the course plan.

Homework assignments: You are responsible for all homework assignments and go over those assigned problems on your own. We will do some of them in class and explain some others upon inquiries. Assigned problems will also be posted on blackboard. Solutions will be posted after materials are discussed in class.

Exams & Quizzes: There are four one-hour exams and a final exam, all closed-booked. The final exam will use the entire class time (two hours and fifteen minutes). On average, there will be two quizzes per week (see course plan). Exams and quizzes are based on homework problems and examples in lectures. An equation sheet will be provided for each exam. The equation sheet will be posted on the blackboard (Course Materials). No equation sheet for quizzes.

Format of quizzes and exams: Quizzes are typically about 20 minutes. It will have one problem that is similar to problems encountered in homework assignments. Exams are closed-book. Typically, an exam will have 3 problems. For full credit, it is important to show detailed steps of calculations. Please bring a calculator to the exam hall.

Reading: You should read the materials in the textbook before the class. Additionally, detailed lecture notes with solution to chosen problems will be distributed.

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

Course Plan
The course plan will be strict. We will progress along to cover all necessary materials. It is a very condensed class, so you must work the hardest possible
to pass the class.

**Brief details:**

- Week 1: Chapters 20, 21, two quizzes (WR); Exam1 on Monday, week 2, last hour of class.
- Week 2: Chapters 22, 23, two quizzes (TW); Exam2 on Thursday, last hour of class.
- Week 3: Chapters 24, 25, two quizzes (TW); Exam3 on Thursday, last hour of class.
- Week 4: Chapters 18, 17, two quizzes (TW); Exam4 on Thursday, last hour of class.
- Week 5: Chapters 27, 28, two quizzes (TR).
- Week 6: Chapters 29, 30, possibly two quizzes (MT), final exam on Thursday, two-hour exam.