

Physics 012, Elementary Physics, Syllabus (June 29 – Aug 7, 2015).

Class Description: Algebra-based survey of electricity, magnetism, optics and modern physics. Appropriate for students in health and life sciences. Accompanying lab: PHYS 022.

Prerequisites: PHYS 011 or PHYS 031 or PHYS 051.

Textbook: Title: Physics, 9th Ed.; Authors: John D. Cutnell and Kenneth W. Johnson. ISBN-13 978-1118-12917-3.

Instructor:

Owen Myers

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Office hours: Monday & Tuesday, 11:30 AM – 12:55 PM or by appointment.

Lecture Schedule & Location:

Lecture days: Monday, Tuesday, Wednesday, Thursday (MTWR).

Time: 9:00-11:15.

Location: LAFAYE L108.

Lecture Description:

In lectures we will concentrate on introduction and consolidation of physical concepts and on that basis, strategies in 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.

Labs:

Lab location: Cook Physical Science Building, room A410.

Labs provide opportunities with hands-on experience. You need to have the lab manual that is available at the UVM bookstore. In all lab sections, please follow guidance and rules by your lab TA and be on time.

Contact your lab TA for any matter regarding lab attendance and grades.

Section #	Time	Days
Z1	1:00-4:30	MW
Z2	1:00-4:30	TR

Lab Schedule:

Mon/Tue June 29-30	Orientation
Wed/Thur July 1-2	Electric Fields and Potentials
Mon/Tue July 6-7	Circuit Analysis
Wed/Thur July 8-9	Tangent galvanometer
Mon/Tue July 13-14	Tangent galvanometer report
Wed/Thur July 15-16	Electromagnetic Induction
Mon/Tue July 20-21	Reflection Refraction
Wed/Thur July 22-23	Optics and Telescopes
Mon/Tue July 27-28	No lab
Wed/Thur July 29-30	Atomic Spectra
Mon/Tue Aug 3-4	Photoelectric Effect
Wed/Thur Aug 5-6	No lab

Homework Assignments:

You are responsible for covering, on your own, all problems assigned in the homeworks. We will do some of them in class and explain some others if requested. Additional and/or modified problems will be posted on blackboard.

Exams & Quizzes:

There are four one-hour exams and a final exam, all close-booked. The final exam will use the entire class time (two hours and fifteen minutes). There will be two quizzes per week on Tuesday and Friday. Problems in the exams and quizzes are based on homework problems and examples done in lectures. An equation sheet will be provided for each exam.

Reading:

You should read the materials in the textbook before the class. The lecture will be more useful if you have already attempted homework problems.

Grades:

Homework assignments are not graded.
Average of quiz grades ----- 20%
Each of the four one-hour exams -- 15%
Final exam ----- 20%.

Other:

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