Syllabus for Physics 116 Online
Summer 2018
Professor Jeff Steele
This syllabus is a live document and subject to change

Course: General Physics II

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Text: Required: Fundamentals of Physics, 9ed (ninth edition), by Halliday, Resnick, and Walker; please note that you can also get the extended version or you can get the shortened version. The text also comes in two parts, but you need both parts for 115 and 116. You may find this book on the College bookstore website, or probably cheaper on Amazon, much cheaper if used. You may use an electronic version. Required: In addition, you need the ExpertTA homework service. This is purchased by semester, so you will need to pay for it this spring in order to do homework.

Registration Link: http://goeta.link/USA48VA-22D6DC-1LH
Optional: Study Guide

Course Comments: This course is the second half of an calculus based comprehensive survey of basic physics. This course covers topics in mechanics (gravitation, equilibrium, fluids), electricity and magnetism (the study of forces, fields, circuits, and waves), and optics (electromagnetic waves, light) at a level appropriate for beginning physics majors, pre-medical students and science majors. We will cover approximately three chapters every week or a bit more. The goal of this course is to train your physical intuition, to give you a basic understanding of electricity and magnetism in the world around us, and to teach you the tools needed for effective problem-solving.

Registration Add/Drop Information
Online registration and payment MUST occur prior to the first class meeting. The drop period is 3 days to have the course not become a part of your student record and the withdrawal period ends on the 7th day. After this you cannot withdraw unless under medical or mitigating circumstances, which must be documented. To drop or withdraw, email the course instructor who will forward your email to the Registrar. The date of your email will be the date used for the course drop/withdrawal.
**Payment:** Once you register, you will be billed by Randolph College – the first billing may be as late as May even if you register earlier. Summer tuition for online course is $450/credit hour and is due prior to the first day of the course. Each lecture course is 3 credit hours, and each lab is 1 credit hour. There is a $30 lab fee per lab course. If you drop the course before the first day of either class, you get a 100% refund for that class. If you drop the course during the first week, you will be reimbursed 90% of your payment. If you drop the course sometime in the second week, you will be reimbursed 50% of your payment. Beyond the second week of a given course, you will not be reimbursed for that course if you drop it.

**Course Schedule (July 9-August 10)**

**Week 1: (July 9)**
- Chapter 12 - Equilibrium
  HW1 assigned M, due 7-16
- Chapter 13 - Gravitation
  HW2 assigned W, due 7-18
- Chapter 21 - Electric Charge
  HW3 assigned Th, due 7-19

**Week 2: (July 16)**
- Chapter 22 - Electric Field
  HW4 assigned M, part due 7-19
  Chapter 23 - Gauss’ Law
  HW5 assigned W, due 7-26
  Exam 1 assigned, chapters 12, 13, 21, 22, due 7-20
- Chapter 24 - Electric Potential
  HW6 assigned Th, due 7-26

**Week 3: July 21**
- Chapter 25 - Capacitance
  HW7 assigned M and due 7-28
  Exam 1 due, Chapters 12, 13, 21, 22
- Chapter 26 - Current & Resistance
  HW8 assigned W, due 7-30
- Chapter 27 - Circuits
  HW9 assigned Th, due 7-31

**Week 4: July 28**
- Chapter 28 - Magnetic Fields
  HW10 assigned M due 8-6
Chapter 29 - Magnetic Fields Due to Currents
HW11 assigned W, due 8-8
HW 11b assigned W, due 8-8

Chapter 30 - Induction
HW12 assigned Th, due 8-9
Exam 2 (Chapters 23-27) assigned, due Monday 8-6

Week 5 (August 6) Chapter 31 - Electromagnetism & AC
HW13 assigned M, due 8-9

Additional Topics
Exam Review
Final Exam assigned 8-9, due 8-12

Course Lecture
Direct lectures will be done via pre-recorded video lecture, from the professor (not outside sources). Videos will include the presentation of the concepts and example problems solved.

Office hours
Office hours are live face to face. A schedule is posted, and may be modified based on the needs and schedules of the students and professor. Office hours may be requested outside of the regularly announced times. Please feel free to try any time, including evenings and weekends, to make an appointment.

As you see by the schedule, the class will move quickly, approximately three chapters per week. There will be one homework assignment due for each chapter. Homework is generally due one week after being assigned, except where noted on the syllabus. Part of the homework must be done by Friday as explained elsewhere.

- **Tests** will cover 2-4 chapters, and there will be two during the semester. Tests are untimed, paper/pencil (upload a scanned copy to Moodle to submit), and you will have a 72 hour window during which to download, work on, and submit.
- **Quizzes** will be offered as an opportunity to improve any low test scores.
- The final is comprehensive, with a larger emphasis on materials from Chapters 28-32 (material covered after exam 2)

Grading
Grading will be determined as follows:
- Homework: 30%
- Exam 1: 20%
- Exam 2: 20%
- Final Exam: 30%
If you do the regular homework assignments, then it is worth 30% of your grade. The more additional homework you do, the more the homework counts, and the less the exams count. If you get all the extra homework points, it is worth 40% of your grade (an additional 10%) and the weight of the exams goes down 10%. If you get half the extra homework points, homework will count as 25% of your grade and the weight of the exams goes down 5% equivalently, etc.

**Honor Code and Responsibility**

Take responsibility for your work and yourself. You are expected to complete all homeworks and exams by the policies outlined for the assignments, on time. Honor is of utmost importance in the academic atmosphere and is taken very seriously by me. I encourage people to work together on homework and labs, but the finished product must be your own work. I would encourage anyone to come to me with a problem that has kept you from doing your work, so that we can work something out, rather than just taking a zero, or worse yet, cheating and possibly failing the class. I will feel free to give you freedom, but then the conduct of the Honor System instituted at Randolph College is in the hands of the students.

**Accommodations for Students with Disabilities**

Students with disabilities needing accommodations in summer online classes at Randolph College may send any requests for accommodations and accompanying documentation to accessibility@randolphcollege.edu.

Students enrolled at other colleges or universities may submit current letters of accommodation from their home school. Students who are not currently receiving accommodations and would like to inquire about receiving them in summer online classes at Randolph College can send any pertinent documentation or inquiries to the Coordinator of Disability Services at the email address listed above.

**Communication**

I plan on using Moodle to communicate. Homework assignments and solutions, exam hints and solutions, schedule changes and guidelines (such as those listed here) will all be on the web so that you can access them anytime, and even print them out if you would like.

Link to Zoom (Office Hours): [https://zoom.us/j/4122028428](https://zoom.us/j/4122028428)

During the first week of the course, I will be in China and may have restricted internet access. If email or zoom is blocked, then feel free to try to contact me in one of the following methods:

Wechat (free downloadable text and video communication): My wechat id: wxid_obalnmb2b1au12

Text: 540-425-4862