COLLEGE PHYSICS II
Term: (Spring 2020) 16-Week Course
Course: PHYS-1402-43401
Course Dates: 1/21/2020 - 5/14/2020

Instructors: Dr. Saeed Ahmad, Prof. Beverly Cannon
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Phone: 972-391-1079
Office & Office Hours: C273
       Monday, Tuesday, Wednesday, Thursday 11:40am - 12:55pm

Census Date: February 3, 2020
Course Drop Date: April 16, 2020
Disclaimer: The instructor reserves the right to amend this syllabus as necessary.
Institutional Policies: Eastfield College Institutional Policies
(www.eastfieldcollege.edu/syllabipolicies)

COURSE DESCRIPTION: The second semester of an algebra and trigonometry - based fundamental principles of physics sequence. The principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics are studied with emphasis on problem solving. Laboratory experiments supporting the topics are included. This is an online class. Both the lecture and the lab are online.

Prerequisite Required: PHYS 1401.

TIME & PLACE: LECTURE: INET (online) LAB: INET (online)

TEXTBOOK & MATERIALS:
  Note: You have two options.
  Either you can buy the textbook from the bookstore, it comes with a MasteringPhysics access code.
  Or you can buy the code directly from the MasteringPhysics website and it comes with an eText.
  In both cases, the access code is good for two semesters (PHYS 1401 and PHYS 1402)
Lab Kit: Go to: https://myhol.holscience.com/enroll/kpwh-vtpb-cxkm-hczk
  Sign up for an HOL account and order your lab kit following the instructions posted on eCampus.

STUDENT LEARNING OUTCOMES: Upon successful completion of the course, the students will:
- Solve problems involving the inter-relationship of fundamental charged particles, and electrical forces, fields, and currents.
Apply Kirchhoff’s Rules to analysis of circuits with potential sources, capacitance, inductance, and resistance, including parallel and series capacitance and resistance.

Solve problems in the electrostatic interaction of point charges through the application of Coulomb’s Law.

Solve problems involving the effects of magnetic fields on moving charges or currents, and the relationship of magnetic fields to the currents which produce them.

Use Faraday’s and Lenz’s laws to determine electromotive forces and solve problems involving electromagnetic induction.

Articulate the principles of reflection, refraction, diffraction, interference, and superposition of waves.

Describe the characteristics of light and the electromagnetic spectrum.

**HOMEWORK:** There will be homework every week. You will turn in the homework using the MasteringPhysics, an online homework system. A brief MasteringPhysics user guide is attached along with this syllabus and also posted on eCampus for reference. Each homework will usually be a combination of conceptual and quantitative problems relating to the material from the previous lectures. Over the course of the semester the homework will amount to 20% of the grade.

It is important to complete the homework to obtain a good understanding of the material covered (and to practice so you can do well on the exams). You are encouraged to work with others on the homework. However, you are discouraged from letting others do the work and then copying what they did, or you doing the work and letting others copy. The instructor has observed that for the most part successful students pay particular attention to the assigned homework and devote considerable effort to it. Feel free to visit the Instructor whenever you may need assistance with the homework.

**VIRTUAL CLASSROOM:** Virtual Classroom link on eCampus course page allows you to participate in course related discussions online, at any time of the day or night, with no need for the participants to be logged into the site at the same time. The discussion is recorded on the course site for all to review and respond at their convenience. Feel free to post your questions in this forum. Anyone in class can respond to the questions and or create new threads. If you have any questions for the instructor, please also email at SaeedAhmad@dcccd.edu and I will respond back within 24 hours during the working days (Monday to Friday).

Please post your short introduction, your name, your major and (optionally) anything else about yourself that you would like to share with the rest of the class, in the thread Introductions under Virtual Classroom by **5:00 pm on Monday, February 3rd.** This introduction will count towards your class attendance for financial aid purposes and is also worth 1% extra credit.

**LAB:** See the instructions above under “Textbook & Materials” on how to order the lab kit and to sign up for an account following the information provided on eCampus. You will submit all the lab data, and answers to the lab questions from this account. Over the course of the semester the lab work will amount to 20% of the grade.

**COURSE SCHEDULE:** See eCampus for suggested weekly schedule of course topics, labs, and exams.

**LATE WORK POLICY:** If you are not able to finish homework on time due to some emergency/illness, contact the instructor as soon as you can, and the instructor may give you extra time to complete the homework. Final grade is FINAL, no work may be handed in for additional credit after the final exam.

**EXAMS:** There will be three exams. All exams will be counted. For each exam, you will be provided a formula sheet and scratch paper, you need to bring a pencil and a scientific calculator. All the exams will be taken at the Eastfield College testing center. If you are planning to take the exams at another DCCCD testing center, please email the instructor (at SaeedAhmad@dcccd.edu) by **5:00 pm on Monday, February 3rd**
indicating your choice of the DCCCD testing center. If you live outside the Dallas/Fort Worth area, you can take the exams with an approved proctor at a local college/university. To get a proctor approved, please email the instructor (at SaeedAhmad@dccc.edu) by **5:00 pm on Monday, February 3rd**.

**Note:** Make-up exams are not given except when a College acceptable excuse (i.e. illness warranting a physician’s care, death in the immediate family, religious absences, and sanctioned college athlete’s events) is supplied with documentation prior to the exam. Final grade is FINAL, no work may be handed in for additional credit after the final exam.

**GRADING**

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<tr>
<th>Course Component</th>
<th>% Value</th>
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<tbody>
<tr>
<td>Homework</td>
<td>20%</td>
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<tr>
<td>Lab</td>
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<td>Exam I</td>
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<td>Exam II</td>
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<td>Total</td>
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**GRADING SCALE:** A: 90 – 100  B: 80 – 90  C: 70 – 80  D: 60 – 70

A grade of F will be assigned to anyone who has below a 60% OR to anyone caught cheating in this course.

**LAB GRADE:** This course satisfies the core curriculum requirement for scientific discovery and sustainability. A minimum lab average of 60 is required in order to pass the course. If your lab average is below 60, regardless of your course average, your course grade will be changed to be equal to your lab average.

*Having trouble?* Your professor should be your first line of defense when you are having trouble. Other resources include:

- your classmates (form a study group!)
- the Tutoring Center.

**ACADEMIC INTEGRITY AND PLAGIARISM**

Scholastic dishonesty, also known as academic dishonesty or misconduct, is the defined by the DCCCD Student Code of Conduct as acting in an unethical, dishonest manner. It includes, but is not limited to: cheating; plagiarism; falsifying or fabricating information; misrepresentation; facilitating scholastic dishonesty; and collusion.

**Potential Consequences:** DCCCD takes acts of scholastic dishonesty very seriously. Students who commit these offenses could: fail the assignment; fail the course; and/or be suspended or expelled from the college.

**LAB GRADE:** This course satisfies the core curriculum requirement for scientific discovery and sustainability. A minimum lab average of 60 is required in order to pass the course. If your lab average is below 60, regardless of your course average, your course grade will be changed to be equal to your lab average.

*The Instructor reserves the right to change the syllabus at a later time. If that happens, an updated copy of the syllabus will be posted on eCampus.*
MasteringPhysics User Guide

First, make sure you have these 3 things...

Email: You'll get some important emails from your instructor at this address.

Course ID: The Course ID is: SP20PHYS1402DRSA

Access code or credit card: An access code card may be packaged with your new book or may be sold by itself at your bookstore. Otherwise, you can buy instant access with a credit card or PayPal account during registration.

Next, get registered and join your course!

1. Go to www.masteringphysics.com
2. Under Register Now, select Student.
3. Confirm you have the information needed, then select OK! Register now.
4. **Enter your instructor’s Course ID (for this course it is: SP20PHYS1402DRSA), and choose Continue.**
5. Enter your existing Pearson account **username** and **password** and select Sign in.
   You have an account if you have ever used a Pearson MyLab & Mastering product, such as MyMathLab, MyITLab, MySpanishLab, or MasteringChemistry.
   - If you don’t have an account, select Create and complete the required fields.
6. Select an access option.
   - Enter the access code that came with your textbook or was purchased separately from the bookstore.
   - Buy access using a credit card or PayPal account.
7. From the “You’re Done!” page, select Go to My Courses.
8. Select Yes and enter your Course ID to join your course. Click Continue.
9. If asked, enter your Student ID according to the instructions provided and click Continue.
   That's it! You should see the Course Home page for the course.

To sign in later:

1. Go to www.masteringphysics.com and select Sign In.
2. Enter your Pearson account **username** and **password** from registration, and select Sign In.

   If you forgot your username or password, select **Forgot your username or password?**