University Physics II 2426-61001 Syllabus
Dallas College Mountain View Campus

Instructor Contact Information
Dr. Jay Bhalerao   jbhalerao@dccc.edu
Ms. Shahnaz Sokhansanj  ssokhansanj@dccc.edu

Communicating with the instructor:
email is the preferred method for communication with the instructor. Instructors typically respond to emails from students within 24 hours; however, over the weekend and holiday periods, there may be a delay in response. Find out more about contacting your instructor.

If we do not respond to your email within 24 hours, please send a reminder.
In your emails please include:
1. Your full name as it is in eCampus
2. Your course and section number (since the instructor may be teaching more than one section of the course).
3. A detailed error message with a screenshot of the error, if applicable.

Virtual office hours: the following hours have been set aside to meet with you individually when you have a question or concern that cannot be answered by email. Our meetings will use the Blackboard Collaborate Ultra platform on eCampus. To set up a meeting, please email the instructor in advance with your question and preferred time from the choices listed below. The link for the virtual meeting is on the left panel of the course page on eCampus and is called Virtual meeting with the instructor." You will need to click on this link to join the meeting.

Times available for you to meet with the instructor:
Monday: 2:00 P.M. - 3:30 P.M.
Tuesday: 5:00 P.M. - 6:00 P.M.
Wednesday: 10:00 A.M. – 11:00 A.M.
Thursday: 11:00 A.M. - 12:300 P.M.
Course Information
Course Title: University Physics I
Course Number: PHYS2426
Section Number: 61001
Semester/Year: Fall/2020
Credit Hours: 4
Class Meeting Time/Location: Internet
Certification Date: September 5 (Saturday)
Last Day to Withdraw: November 12 (Thursday)

Course Description (Lecture):
The second semester of a calculus-based physics sequence for science, computer science, and engineering majors. Topics include electricity, magnetism, electromagnetism, wave motion, acoustics and optics with emphasis on problem solving. Laboratory experiments supporting the topics are required. (3 Lec. 3 Lab.)

Course Description (Lab): Laboratory experiments supporting theoretical principles presented in PHYS 2426 involving the principles of electricity and magnetism, including circuits, electromagnetism, waves, sound, light, and optics; experimental design, data collection and analysis, and preparation of laboratory reports.

Course Pre-requisites (Lecture): PHYS 2425. MATH 2414 credit or concurrent enrollment in MATH 2414. DREA 0093 or English as a Second Language (ESOL) 0044 or have met the Texas Success Initiative (TSI) standard in Reading

Student Learning Outcomes (Lecture)
Upon successful completion of this course, students will:
1. Articulate the fundamental concepts of electricity and electromagnetism, including electrostatic potential energy, electrostatic potential, potential difference, magnetic field, induction, and Maxwell’s Laws.
2. State the general nature of electrical forces and electrical charges, and their relationship to electrical current.
3. Solve problems involving the inter-relationship of electrical charges, electrical forces, and electrical fields.
4. Apply Kirchhoff’s Laws to analyze circuits with potential sources, capacitance, and Resistance, including parallel and series capacitance and resistance.
5. Calculate the force on a charged particle between the plates of a parallel-plate capacitor.
6. Apply Ohm’s law to the solution of problems.
7. Describe the effects of static charge on nearby materials in terms of Coulomb’s Law.
8. Use Faraday’s and Lenz’s laws to find the electromotive forces.
9. Describe the components of a wave and relate those components to mechanical Vibrations, sound, and decibel levels.
10. Articulate the principles of reflection, refraction, diffraction, interference, and superposition of waves.
11. Solve real-world problems involving optics, lenses, and mirrors.

Students Learning Outcomes (Lab):
Upon successful completion of this course, students will:
1. Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
2. Conduct basic laboratory experiments involving electricity and magnetism.
3. Relate physical observations and measurements involving electricity and magnetism to theoretical principles.
4. Evaluate the accuracy of physical measurements and the potential sources of error in the measurements.
5. Design fundamental experiments involving principles of electricity and magnetism.
6. Identify appropriate sources of information for conducting laboratory experiments involving electricity and magnetism.

Texas Core Objectives
The College defines essential knowledge and skills that students need to develop during their college experience. These general education competencies parallel the Texas Core Objectives for Student Learning. In this course, the activities you engage in will give you the opportunity to practice two or more of the following core competencies:

Critical Thinking Skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information

Communication Skills - to include effective development, interpretation, and expression of ideas through written, oral, and visual communication

Empirical and Quantitative Skills - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

Teamwork - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

Personal Responsibility - to include the ability to connect choices, actions, and consequences to ethical decision-making
Social Responsibility - to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities

Required Course Materials
If your Dallas College course requires learning materials they will be provided as part of the IncludED program (dcccd.edu/included) or as free materials you can access in your online course shell.
* By participating in this program, all required course materials are provided to you. Depending on your institution, this could be part of a course charge or included in your tuition. This material can be accessed through your school's Learning Management System. Contact your campus store or instructor for more details.

If you opt out of the IncludED program, you are responsible for obtaining all your required learning materials by the first day of the class. For more details, see Institutional Policies.

Modified Mastering Physics with Pearson e-Text - Stand Alone Access Card for Physics for Scientists & Engineers: (0609)
**ISBN:** 9780136780090
**Author:** Knight
**Publisher:** Pearson Learning Solutions
**Formats:** Adobe Digital Editions

Late Work Policy (Important)
All assignments are subject to 20% reduction in the grade per late day. No matter what reason, NO exception will be accepted.
You are required to upload your assignments in words or pdf format. You are allowed to upload an assignment for the second time in the right format( word or pdf), but it will be considered as a late assignment.
The last day to submit any assignment is **Sunday 12/06** by midnight, and the penalty rule will be applied.
The Final exam will be given only on the exact designated day and time. You will not be allowed to take the exam at any other day and time regardless of your other commitments and obligations. Please manage ahead of time to have the exam day set aside for the exam.
Other Course Policies
**Syllabus:** Read the syllabus very carefully. You can find all the rules, policies, evaluation weight for each assignments category, and due dates under the syllabus tab and on the syllabus document.

**Instructions:** The instructions for each assignment will be posted under each assignment in its folder on eCampus.

**Course material:** All the digital course materials needed for this course have been provided by the school. You can purchase any new or old edition from any publisher if you prefer to have the physical textbook for your own reading.

**Introduction:** Add a few lines about yourself in the virtual classroom and make a very short video recording of your introduction. Copy and paste the link to your video under your written introduction.

**Making group:** Go through all the introductions to pick a partner to work on the assignments. Working with a teammate is optional but strongly recommended. Groups should be limited to two people. Add your name to the “Group” tab after you have found a partner.

**Late work policy:** should be taken as a serious rule for the class. Do not lose points just for being proctanator.

**Assignment submission:** assignments on paper must be submitted as one whole document as a Word or pdf document.

**Email:** you are required to have set up a correct email address with the school so you can receive the instructor’s emails.

**Course number and section in your email:** add your class number if you want a response to your email from the instructor.

**Course units:** All the assignments are under course units. Under each unit you can find the PowerPoint slides, the instructor lecture videos and notes, lab assignments, homework assignments. You will do the homework assignments through the Mastering Physics tab on eCampus.

**Availability:** This course will be taught online, but the instructor is available for your questions, all you need to do is to email your question and give 24 hours to the instructor to get back to you.
Virtual meeting: We will schedule to meet virtually on a day and time to meet once a week for half an hour for any questions you may have about the course. The attendance is optional, but the attendance will be taken as extra credit.

Institutional Policies
Institutional Policies include information about tutoring, disability services, class drop and repeat options, Title IX, and more.

Course Schedule and Evaluation

Evaluation:

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Homework</td>
<td>25%</td>
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<tr>
<td>Labs</td>
<td>25%</td>
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<tr>
<td>Tests</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
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<tr>
<td>Project</td>
<td>10%</td>
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Week 1 - Introduction in virtual classroom and making groups.

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
<th>Due Dates</th>
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<tbody>
<tr>
<td>2 or 3 lines written introduction in the virtual classroom</td>
<td>One HW grade</td>
<td>Wednesday-8/26 by midnight(11:59pm)</td>
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<tr>
<td>1 or 2 minutes video recording of your introduction</td>
<td>One HW grade</td>
<td>Friday- 8/28 by midnight</td>
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<tr>
<td>Making groups of two</td>
<td>Optional</td>
<td>Sunday 8/30 by midnight</td>
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Course calendar: homework, labs, tests, final exam, and project.

<table>
<thead>
<tr>
<th>Week</th>
<th>Units</th>
<th>Topic</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>Week 1 &amp; 2 8/24 – 9/06</td>
<td>Unit 1</td>
<td>Mathematics Background</td>
<td>06 Sept. by midnight.</td>
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<tr>
<td>10/2-10/4</td>
<td>Test 1</td>
<td>On unit 2</td>
<td>04 Oct. by midnight.</td>
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<td>10/23- 10/25</td>
<td>Test 2</td>
<td>On unit 3</td>
<td>25 Oct. by midnight</td>
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<td>Weeks 10, 11, 12, &amp; 13 10/26-11/22</td>
<td>Unit 4</td>
<td>Unit 4-Magnetism: Magnetic Force and Magnetic Field Magnetic Induction</td>
<td>22 Nov. by midnight</td>
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<tr>
<td>11/20-11/22</td>
<td>Test 3</td>
<td>On unit 4</td>
<td>22 Nov. by midnight</td>
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<tr>
<td>Semester project</td>
<td>Project</td>
<td>Planet Earth</td>
<td>22 Nov. by midnight</td>
</tr>
<tr>
<td>Weeks 14 &amp; 15 11/22-12/06</td>
<td>Unit 5</td>
<td>Electro magnetic Waves</td>
<td>06 Dec. by midnight</td>
</tr>
<tr>
<td>Week 16</td>
<td>All units</td>
<td>Final comprehensive exam</td>
<td>08 Dec. at 2:00 pm-6:00 pm</td>
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Semester Calendar:

<table>
<thead>
<tr>
<th>Fall Academic Semester 2020 Dates for 16-Week Semester</th>
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<tbody>
<tr>
<td>August 17 (Monday)</td>
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<td>August 21 (Friday)</td>
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<td>August 24 (Monday)</td>
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<td>September 5 (Saturday)</td>
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<td>September 7 (Monday)</td>
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<td>September 8 (Tuesday)</td>
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<td>November 12 (Thursday)*</td>
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<td>November 26 (Thursday)</td>
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<td>November 30 (Monday)</td>
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<td>December 7-10 (Monday thru Thursday)</td>
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<td>December 10 (Thursday)</td>
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<tr>
<td>December 14 (Monday)</td>
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<td>December 24 (Thursday)</td>
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Syllabus change disclaimer: the instructors reserve the right to amend the syllabus as necessary.