Instructors:
Jayant Bhalerao (jbhalerao@dcccd.edu)
Dr. Victor Weir (vweir@dcccd.edu)

Physics classroom and lab: W16
Credit Hours: 4
Office Hours: by email

Meeting Days & Time: online lectures and labs.

Division: STEM
Office: STEM Division Office, Office Hours: 8:00 A.M.-5:00 P.M.
Office Phone: (214) 860-8649
Office Location: W120A

Physics is “The mystery of being!”

“We each exist for but a short time, and in that time explore but a small part of the whole universe. But humans are a curious species. We wonder, we seek answers. Living in this vast world that is by turns kind and cruel, and gazing at the immense heavens above, people have always asked a multitude of questions: How does the universe behave? What is the nature of reality? Where did all this come from? Did the universe need a creator? Most of us do not spend most of our time worrying about these questions, but almost all of us worry about them some of the time. Why is there something rather than nothing? Why do we exist?
Why this particular set of laws and not some other?”
Steven Hawking
**Course description:**
This course is primarily for non-science majors. It is a study of the basic principles and concepts of physics, chemistry, and nuclear science. These three basic sciences are related to the physical world at the introductory level.

**Course prerequisites:** One of the following must be met:
1. Developmental Reading 0093 AND Developmental Writing 0093;
2. English as a Second Language (ESOL) 0044 AND 0054; or
3. Have met the Texas Success Initiative (TSI) Reading and Writing standards.

**How to login on ecampus.dcccd.edu:**
- Go to http://ecampus.dcccd.edu and click on “Access Courses.” If you are logging in for the first time, enter your student ID number with a lower case “e” in front of the number. This number is used as both the user name and the temporary password. Please change your password after your initial login.

  Example: user name: e3456789; password: e3456789.

  a) Use an updated browser
  b) Have all Javascript settings enabled in your browser
  Tip: If one browser does not perform well, try another.
  c). Set your browser to accept all cookies.

  **NOTE**** Have Questions about the Recent Password Updates? Please visit dcccd.edu/password-update for guides and more information.

This is a web-based course, but the instructor(s) are available through email.

In your email, make sure you **include your course number (i.e., 1415) and your full name in the subject box.**

**Please check your eCampus email address to ensure that you receive emails from the instructor(s).**
**Course Materials:**

You are required to purchase the access key for the following textbook. The image of the textbook helps you to select the right book.

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Author(s):</td>
<td>Hewitt, Paul G.</td>
</tr>
<tr>
<td>Discipline(s):</td>
<td>Physics</td>
</tr>
<tr>
<td>Textbook ISBN-13</td>
<td>9780134060484</td>
</tr>
</tbody>
</table>

There is a button on eCampus called Mastering Physics that takes you to the Mastering Physics website and assignments. This website is managed by the publisher of the textbook, Pearson. You will be able to purchase the access key for the homework on eCampus. **You do NOT need a course ID number** for the class on Mastering Physics. Please do not try to access the homework from outside of eCampus, since you will get an error.

You will find instructions on how to obtain an access key when you click on the “Mastering Physics” tab on eCampus.

**Assignments and Course Units**
The following section explains how the lessons and assignments are organized on eCampus.

- The tab called “Course Units” on eCampus includes all the units/modules for the course.
- The course units include:
  - Learning material such as objectives, the course content, PowerPoints, videos, animations, and so on.
  - All the assignments such as lab experiments, quizzes, homework on Mastering Physics and so on.
  - To access these materials, please click on the “Course Units” tab, and then on the “Unit” link on eCampus.
  - All assignments for a given unit will have the same due date.
  - The due dates can also be found in the Course Calendar.
- You may submit your completed assignments at any time before the due date. Once submitted, the instructor is allowed to grade your assignment.
- Purchasing the access code to Mastering Physics is mandatory for homework and exams. Do not rely on the free trial access code.
• You are responsible for uploading the correct assignment to its folder on eCampus. Make sure the file has been saved as a .pdf or .doc or .docx document. Instructors cannot open assignments with the ".pages" extension, and you will receive a zero for any such file or file format that cannot be opened in eCampus. It is your responsibility to check that the submitted document is correct and can be opened in eCampus.

During the short terms such as the Winter term, May and Summer, the assignments may be visible to you for the entire class time. However, for regular semesters, assignments will be made available to you sequentially, after the due date has passed for each unit. The reason is that the assignments are revised and modified during a regular semester. Therefore, please do not start working on any assignment before the start date for a given unit.

• Any late assignment (homework, lab, and quiz) will be penalized 10% per late day.

• The lab reports should include the names of all group members. Missing names will lose 10 points of the grade.

1) Homework assignments: these will be posted on Mastering Physics. You are generally allowed up to three attempts per question. You will be able to view your grades after your submission. Your grades from Mastering Physics will be periodically updated into eCampus. Since these updates need to be done manually, there will be times when your homework grades on eCampus will not match those on Mastering Physics. Please do not email the instructor about this.

2) Lab assignments: lab instructions will be posted under the “Lab Assignments” folder for each unit. There will be virtual labs, practical labs, and short project activities. For practical labs, simple, inexpensive materials will be needed. These materials can be found in local stores or on amazon.com. A list of required lab materials will be posted on eCampus.

Please ensure you have Java and Adobe Flash Player installed on your computer, and you are using the latest version of your browser.

3) Project: it is a hands-on semester project based on scientific and experimental principles learned in this course. The project assignments consist of a two- to three-page project report (essay format), PowerPoint slides, and a video presentation in which you explain the project. Your face and voice need to be clearly seen and heard in this video. The project video needs to be uploaded to MediaHub (https://dcccd.yuja.com), and a link to the video needs to be posted on eCampus.
Course Outline:
Unit 1 - Units of Measurement and the Scale of Universe
Unit 2 - Mechanics: Motion-Newton's Laws of Motions, Momentum and Energy, Gravity, and Fluid Mechanics. Unit 3 - Thermodynamics
Unit 4 - Electricity and Magnetism
Unit 5 - Waves, Sound, and Light
Unit 6 - Atoms and Radioactivity

Core Objectives: the instructor will assess all the core objectives through the assigned project.

Teamwork - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal. More information is posted below.

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.

Group work:
• The main core objective for the Fall 2019 semester is Teamwork. Teamwork is when individuals work together with a common goal. It involves good communication, distribution of responsibilities, completion of tasks in a timely manner, and positive relationships where conflicts are resolved through dialogue and mediation. Good collaboration and teamwork skills are what employers are looking for.
• Since we will be assessing teamwork skills of the students this semester, it is required that ALL students form groups. Each group should consist of not more than two people.
• Advantage of working in groups: working on assignments is easier if you have a partner. It also helps you stay motivated and on track.
• If you have tried and cannot form a group of two people, please let the instructor know, and possibilities for finding a partner for you will be explored.
• Both names of the team members should be on top of the assignments. Please put your name first, followed by that of your partner.
• Each person in the group must submit the assignments in his/her own folder to receive a grade for the assignment. This means there will be NO grade if you do not submit the assignment to your own folder, even though your name is on your partner’s assignment.
• Each person is responsible for contributing to the assignment. You do not need to include your partner’s name on the assignment if your partner does not cooperative or contribute. You can state at the top of the assignment “Partner (first and last name) did not contribute at all.”

**Course evaluation:**
Homework = 30%
Lab = 30%
Project = 25%
Quiz = 15%

**Late Work Policy:** late assignments will be penalized 10% per day, NO exceptions.
**Please note there will be no grades for assignments submitted after 12 December 2019.**

**Grading scale:** 90 and above = A, 80-89 = B, 70-79 = C, 60-69 = D, 59 and below = F.

**Lessons and Assignments- Units on eCampus:**

Assignments that you will turn in are: homework, virtual labs, practical labs and activities, and a semester project. All these assignments are listed under each unit with a due date. As you read each unit and open the various links under the unit, you will learn about all these assignments. The procedure is straightforward. If things are not clear, please ask the instructor or your classmates.

You MUST accomplish the following reading and preparation assignments on a regular basis **before** attempting to tackle your weekly assignments:

1. Read the assigned material in any Physical Science textbook.
2. Study and review the lecture and PowerPoint questions posted for each unit on eCampus.
3. Watch, observe, review, and study the videos, animations, and interactive figures in the “Study Area” for each chapter on Mastering Physics.
4. Complete and submit homework for each chapter (or unit) in the “Assignment” folder on Mastering Physics. Your final grades will be transferred to the eCampus grade book at the end of the semester.
5. Perform the assigned practical/virtual labs or short activities for each unit, and complete the corresponding lab report. Some lab materials/supplies will be needed for a few labs and the semester project. You are required to purchase these supplies from local stores or online sources such as amazon.com.
6. Watch the assigned lecture videos on khanacademy.org. These are for your own personal learning.
7. Project: details will be posted in the “Project” folder on eCampus.
Virtual classroom:

Introduction/Virtual Classroom:
- To help you find someone you would like to work with, please introduce yourself and please provide relevant contact information in the Virtual Classroom on eCampus.
- You can post this information under the "Introductions" forum by creating and editing your own threads. Please note that all communication and posts must follow proper academic classroom etiquette.
- Your posts should include the following: First and last name, email address, major, any other information you would like to share such as your preferred time for working on assignments. You can add additional interesting information about yourself such as high school attended and so on.
- You can create, edit, and delete your own threads in any of the forums in the Virtual Classroom.

Please make a 2-minute video.*
- Please make your video while you are introducing yourself. Instructions for uploading your video are posted on eCampus. The video needs to be uploaded to the DCCCD MediaHub website YuJa (https://dcccd.yuja.com/). There are two purposes for this video recording.
  1. Your classmates will get a chance to meet you.
  2. This will allow you to practice recording a video for your semester project.
- Please see the Instructional Documents button on eCampus for more information.
Course evaluations, assignments, and calendar:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight by percentage</th>
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</thead>
<tbody>
<tr>
<td>Homework on Mastering</td>
<td>30%</td>
</tr>
<tr>
<td>Lab</td>
<td>30%</td>
</tr>
<tr>
<td>Project</td>
<td>25%</td>
</tr>
<tr>
<td>Quiz</td>
<td>15%</td>
</tr>
<tr>
<td>Extra Credit/ Star party</td>
<td>up to 3%</td>
</tr>
</tbody>
</table>

Class introduction and making groups

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight by percentage</th>
<th>Due date by 11:59 P.M.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction in virtual classroom</td>
<td>One homework grade</td>
<td>Sunday, 1 Sept. 2019</td>
</tr>
<tr>
<td>Making a video of your introduction</td>
<td>One homework grade</td>
<td>Sunday, 1 Sept. 2019</td>
</tr>
<tr>
<td>Making groups.</td>
<td></td>
<td>Sunday, 8 Sept. 2019</td>
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</tbody>
</table>

Class assignments calendar:
Tentative due dates for the assignments. These may be adjusted as necessary.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Description</th>
<th>Due date by 11:59 P.M.</th>
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</thead>
<tbody>
<tr>
<td>Unit 1</td>
<td>Math background, units</td>
<td>Sunday, 8 Sept. 2019</td>
</tr>
<tr>
<td>Unit 2</td>
<td>Mechanics</td>
<td>Sunday, 29 Sept. 2019</td>
</tr>
<tr>
<td>Unit 3</td>
<td>Thermodynamics</td>
<td>Sunday, 13 Oct. 2019</td>
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<tr>
<td>Unit 4</td>
<td>Electricity and magnetism</td>
<td>Sunday, 27 Oct. 2019</td>
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<tr>
<td>Unit 5</td>
<td>Waves, sound and light</td>
<td>Sunday, 10 Nov. 2019</td>
</tr>
<tr>
<td>Unit 6</td>
<td>Atoms and radioactivity</td>
<td>Sunday, 24 Nov. 2019</td>
</tr>
<tr>
<td>Project</td>
<td>To be announced</td>
<td>Sunday, 8 Dec. 2019</td>
</tr>
<tr>
<td>Star Party/Extra credit</td>
<td>To be announced</td>
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**The instruction for each category is in the corresponding folder on ecampus**

Late work policy: late assignments will be penalized 10% per day, NO exceptions. Please note that there will be absolutely No Late assignments after the last day of class.

Responsibility of College Learner:
As a student in this college course, it is your responsibility to have the necessary course materials and to locate a computer with reliable internet access. Computer and internet issues/problems not associated with the eCampus and Mastering websites, technical issues or downtime will not be considered exceptions to the late work and makeup exam policies. It is also your responsibility to have the necessary course materials to complete the assignments. You will not receive extensions on assignments or tests due to financial issues, not receiving Mastering Physics by the start of class, or
personal computer issues. Please plan ahead and do not wait until the last minute to complete assignments or tests.

Institutional Policies:
Please visit www.mountainviewcollege.edu/syllabipolicies
for a complete list of institutional policies (Stop Before You Drop; Withdrawal Policy; Repeating a Course; Financial Aid; Academic Honesty; Americans with Disabilities Act Statement; Harassment, Discrimination and Sexual Misconduct, Religious Holidays; and Campus Emergency Operation Plan and Contingency Plan.)

<table>
<thead>
<tr>
<th>Fall Academic Semester 2019 Dates for 16-Week Fall Semester</th>
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<tbody>
<tr>
<td>August 19 (Monday) Faculty Reports</td>
</tr>
<tr>
<td>August 23 (Friday) District Conference Day</td>
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<tr>
<td>August 26 (Monday) Classes Begin</td>
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<tr>
<td>September 2 (Monday) Labor Day Holiday</td>
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<tr>
<td>September 3 (Tuesday) Classes Resume</td>
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<tr>
<td>September 9 (Monday) 12th Class Day (Certification Date)</td>
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<tr>
<td>November 14 (Thursday)* Last Day to Withdraw*</td>
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<tr>
<td>November 28 (Thursday) Thanksgiving Holidays Begin</td>
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<tr>
<td>December 2 (Monday) Classes Resume</td>
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<tr>
<td>December 9-12 (Monday thru Thursday) Final Exams</td>
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<tr>
<td>December 12 (Thursday) Semester Ends</td>
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<tr>
<td>December 16 (Monday) Last day for faculty to submit grades electronically through eConnect to the Registrar's Office.</td>
</tr>
<tr>
<td>December 24 (Tuesday) College buildings and offices will be closed for the holidays at end of workday.</td>
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</tbody>
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Syllabus change disclaimer: the instructors reserve the right to amend the syllabus as necessary.