Physics 2425 71001 Syllabus
Dallas College North Lake Campus

Contacting Your Instructor
Instructors typically respond to emails from students within 24 hours. However, over the weekend and holiday periods responses may be delayed. Find out more about contacting your instructor.

Instructor Information
Name: Maria Hossu
DCCCD Email: mhossu@dcccd.edu
Office Phone: contact by email
Office Location: C229
Office Hours: online Monday 5:45-6:45PM
Division Office and Phone: Virtual Math/Sciences Office

Course Information
Course Title: University Physics I
Course Number: Phys 2425
Section Number: 71001
Semester/Year: Fall/2020
Credit Hours: 4
Class Meeting Time/Location: T, Th 10:30-11:30 AM online Q&A optional sessions
Certification Date: 8/29/2020
Last Day to Withdraw: 9/30/2020

Course Prerequisites
MATH 1315 (Algebra), DREA 0093 or English as a Second Language (ESOL) 0044 or have met the Texas Success Initiative (TSI) standard in Reading.
Course Description
This course is a calculus based Physics class that meets laboratory science requirements for engineering majors or other science majors needing calculus-based general physics.

Student Learning Outcomes
Physics 2425 supports the following learning outcomes from the Texas Higher Education Coordinating Board. Following the successful completion of this course, students will:
1. Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration.
2. Apply Newton’s laws to linear and circular motion.
3. Identify the different types of energy.
4. Solve problems using principles of conservation of energy.
5. Use conservation of linear momentum and energy to solve problems.
6. Determine the location of the center of mass and center of rotation for rigid bodies in motion.
7. Solve rotational kinematics and dynamics problems
8. Demonstrate an understanding of equilibrium, including the different types of equilibrium, by solving specific problems.
9. Discuss simple harmonic motion and its application to real-world problems.
10. Solve problems involving the First and Second Laws of Thermodynamics.

Learning Outcomes for Laboratory:
1. Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
2. Conduct basic laboratory experiments involving classical mechanics.
3. Relate physical observations and measurements involving classical mechanics 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 classical mechanics.

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

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

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

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

**Required Course Materials**

Dallas College provides the course required materials as part of the IncludED program (dcccd.edu/included). You can access the etext and Modified Mastering Physics directly in your online course shell (ecampus).

2. Internet connection and media player software are required to access the ecampus course materials, Hands on Labs and Mastering Physics resources. The browser and the players like Java, QuickTime player, Adobe reader, Power point viewer depend on your operating system.

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.

**Graded Work**

The tables below provide a summary of the graded work in this course and an explanation of how your final course grade will be calculated.
Summary of Graded Work

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Number</th>
<th>Percentage</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>4</td>
<td>60%</td>
<td>Exams</td>
</tr>
<tr>
<td>Labs</td>
<td>10</td>
<td>25%</td>
<td>Labs</td>
</tr>
<tr>
<td>HW</td>
<td>14</td>
<td>15%</td>
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</table>

**TOTAL: 100%**

Final Grade

<table>
<thead>
<tr>
<th>Percentages</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>90-100%</td>
<td>A</td>
</tr>
<tr>
<td>80-89%</td>
<td>B</td>
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<tr>
<td>70-79%</td>
<td>C</td>
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<tr>
<td>60-69%</td>
<td>D</td>
</tr>
<tr>
<td>0-59%</td>
<td>F</td>
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Description of Graded Work

**Tests:** There will be **five exams** in this course, but the average will be done with the best 4 scores. The problems in the tests will be similar with the HW, reviews, the sample problems posted on ecampus for each section, and solved problems from the book. A formula sheet provided on ecampus and scratch paper can be used for each test along with a pencil and a calculator. The tests are 2h each and they will be proctored using the Respondus LockDown browser. A Chromebook, some tablet, smartphone or Linux computer may not be suitable for some activities in this course. Please ensure you have access to a desktop or laptop device a Windows or OS X operating system with a camera for taking the exams. Details about the set up and a practice test are available on ecampus. Plan your testing time carefully, you can take the tests just once and there is no makeup test for a missed test.

**Labs:** Labs are a combination of hands on and virtual labs. The lab instructions posted for each lab are on ecampus **A passing grade (average of 60 or above) is required for the lab in order to pass the course.** The grade is determined by the accuracy and quality of the lab work reflected by the lab report. Each lab report should follow the guidelines posted on ecampus. Late lab reports will be accepted, but with 20 points off penalty.

**Homework:** Problems, questions, videos will be assigned for each chapter and submitted through ModifiedMasteringPhysics. Deadlines are posted for each chapter on MasteringPhysics. There is no credit for late HW.
Late Work Policy
There is no credit for late HW.
Late lab reports will be accepted, but with 20 points off penalty.

Other Course Policies
Weekly 1h Blackboard Colaborate online sessions are scheduled for discussions, and questions and answers.
Online office hours will be conducted weekly through Blackboard Collaborate.
For free online tutoring follow: online tutoring

Institutional Policies
Institutional Policies include information about tutoring, Disabilities Services, class drop and repeat options, Title IX, and more.
## Course Schedule

### Listing of Assignments by Week

<table>
<thead>
<tr>
<th>Week</th>
<th>Readings &amp; Assignments</th>
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<tbody>
<tr>
<td>1</td>
<td>Ch 1</td>
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<tr>
<td>2</td>
<td>Ch 2</td>
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<tr>
<td>3</td>
<td>Ch 3</td>
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<tr>
<td>4</td>
<td>Ch 4, Test 1</td>
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<tr>
<td>5</td>
<td>Ch 5</td>
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<td>Ch 7</td>
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<tr>
<td>13</td>
<td>Ch 14, 15</td>
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<tr>
<td>14</td>
<td>Ch 18,</td>
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<tr>
<td>15</td>
<td>Ch 19, Test 4</td>
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<tr>
<td>16</td>
<td>Test 5*</td>
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