UTRGV Course title and number  
General Physics I, PHYS 1401 12C

Instructor Name  
Mkhitar Hobosyan, Ph.D.

Term: Fall 2019

Meeting times and location  
TR 03:30 pm-04:45 pm, BINAB 2.220

Office location & hours  
M1, Room 217, MTW 11am-1pm or by appointment

Textbook and/or Resource Material
College physics, OpenStax website. https://openstaxcollege.org/textbooks/college-physics. (This is a FREE TEXT).

Homework will be assigned through Blackboard via Respondus (free for students). You should always check the Blackboard for assignments, announcements and additional materials in Course Materials section.

Course Description and Prerequisites
This is an algebra-based introduction to the principles of mechanics, fluids, heat, waves, and sound for students fulfilling a natural science requirement and premedical students. The course includes three laboratory hours a week to emphasize course concepts. Prerequisites: MATH 1414, MATH 1314, MATH 2412, or MATH 2413.
This course is restricted to BECHS (Brownsville Early College HS) students only.

Learning Objectives/Outcomes for the Course
Upon successful completion of this course, you should be able to demonstrate and understand how to apply physical principles to the world around us. Also, you learn how to use mathematical concepts to solve for basic physical quantities and solve physics problems and interpret the mathematical solutions in terms of physical realities.

- Make an order of magnitude estimate of an answer as well as carry out detailed calculations.
- Discuss the physical processes in a system and how they affect the evolution of the system.
- Identify the forces acting on a system and predict how it will move as a response.
- Identify the different energies present in a system, including kinetic, potential, chemical, and thermal energies, and predict how these are exchanged as the system evolves.
- Use principles of impulse and linear momentum to solve problems.
- Solve problems in rotational kinematics and dynamics, including the determination of the location of the center of mass and center of rotation for rigid bodies in motion.
- Solve problems involving rotational and linear motion.
- Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level.
- Determine how the pressure and velocity are related in a fluid system.

Learning Objectives for Core Curriculum Requirements
This course satisfies Natural Science core curriculum requirement. The following general education competencies are addressed: Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, Teamwork, and Personal Responsibility.

Grading Policies
Course grade: Lecture – 75%, Lab – 25% of the course grade (a separate syllabus will be posted for the labs).
Lecture grade: For each chapter, you will be assigned ~10 homework problems via Blackboard. Homework is due one week after it is assigned. No homework will be accepted beyond one week after it is assigned. It is to your advantage to stay current on the homework as it provides you with additional practice necessary for the exams. Two mid-term exams and a final comprehensive exam will be administered as indicated in the schedule. There will be quizzes after each chapter covered, which will account to additional (extra) 5% of your Lecture grade. The final course grade will be based on the following:
• Homework: 20%
• Two Mid-term Exams: each 20%
• Final exam: 40%
• Quizzes-5 % (bonus)

Grading: A: 90-100%, B: 80-89%, C: 70-79%, D: 55-69%, F: Below 55%

Calendar of Activities

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>MIDTERM</td>
<td>Covers topics from weeks 1-6</td>
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<tr>
<td>7-8</td>
<td>Energy, work. Kinetic energy, Potential Energy, conservation of energy. Momentum and collisions. 2D collisions</td>
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<tr>
<td>MIDTERM</td>
<td>Covers topics from weeks 7-13</td>
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<tr>
<td>FINAL EXAM</td>
<td>Comprehensive</td>
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It is not possible to cover all topics during lectures; some materials may be assigned for your independent review.

The UTRGV academic calendar can be found at [https://my.utrgv.edu/home](https://my.utrgv.edu/home) at the bottom of the screen, prior to login. Some important dates for Fall 2019 include:

August 26       First day of classes
August 29       Last day to add a course or register for Fall 2019
September 2     Labor Day Holiday – NO classes
November 13      Last day to drop a course; will count toward the 6-drop rule
November 28 - 29  Thanksgiving Holiday – NO classes
December 5       Study Day – NO classes
December 6 - 12  Final Exams
December 13 - 14  Commencement Exercises

Other Course Information

A prerequisite assessment test will be given during the first week of classes for a bonus 1% towards the lecture grade. This test is different from the lab pre- and post-test. The problems will include basic algebra questions.
UTRGV Policy Statements

**STUDENTS WITH DISABILITIES:**

Students with a documented disability (physical, psychological, learning, or other disability which affects academic performance) who would like to receive academic accommodations should contact **Student Accessibility Services (SAS)** as soon as possible to schedule an appointment to initiate services. Accommodations can be arranged through SAS at any time, but are not retroactive. Students who experience a broken bone, severe injury, or undergo surgery during the semester are eligible for temporary services.

**Pregnancy, Pregnancy-related, and Parenting Accommodations**

Title IX of the Education Amendments of 1972 prohibits sex discrimination, which includes discrimination based on pregnancy, marital status, or parental status. Students seeking accommodations related to pregnancy, pregnancy-related condition, or parenting (reasonably immediate postpartum period) are encouraged to contact Student Accessibility Services for additional information and to request accommodations.

**Student Accessibility Services:**

**Brownsville Campus:** Student Accessibility Services is located in 1.107 in the Music and Learning Center building (BMSLC) and can be contacted by phone at (956) 882-7374 or via email at ability@utrgv.edu.

**Edinburg Campus:** Student Accessibility Services is located in 108 University Center (EUCTR) and can be contacted by phone at (956) 665-7005 or via email at ability@utrgv.edu.
MANDATORY COURSE EVALUATION PERIOD:
Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (http://my.utrgv.edu); you will be contacted through email with further instructions. Students who complete their evaluations will have priority access to their grades. Online evaluations will be available on or about:

<table>
<thead>
<tr>
<th>Module</th>
<th>Dates</th>
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<tbody>
<tr>
<td>Module 1</td>
<td>October 2nd – 8th</td>
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<tr>
<td>Module 2</td>
<td>November 27th – December 3rd</td>
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<tr>
<td>Full Fall Semester</td>
<td>November 14th – December 4th</td>
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ATTENDANCE:
Students are expected to attend all scheduled classes and may be dropped from the course for excessive absences. UTRGV’s attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics; for observance of religious holy days; or for military service. Students should contact the instructor in advance of the excused absence and arrange to make up missed work or examinations.

SCHOLASTIC DISHONESTY:
As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism (including self-plagiarism), and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to Student Rights and Responsibilities.

SEXUAL MISCONDUCT and MANDATORY REPORTING:
In accordance with UT System regulations, your instructor is a “Responsible Employee” for reporting purposes under Title IX regulations and so must report to the Office of Institutional Equity & Diversity (oie@utrgv.edu) any instance, occurring during a student’s time in college, of sexual misconduct, which includes sexual assault, stalking, dating violence, domestic violence, and sexual harassment, about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at www.utrgv.edu/equity, including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect that is free from sexual misconduct, discrimination, and all forms of violence. If students, faculty, or staff would like confidential assistance, or have questions, they can contact OVAVP (Office for Victim Advocacy & Violence Prevention) at 665-8287, 882-8282, or OVAVP@utrgv.edu.

COURSE DROPS:
According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the “3-peat rule” and the “6-drop” rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.

STUDENT SERVICES:
Students who demonstrate financial need have a variety of options when it comes to paying for college costs, such as scholarships, grants, loans and work-study. Students should visit the Students Services Center (U Central) for additional information. U Central is located in BMAIN 1.100 (Brownsville) or ESSBL 1.145 (Edinburg) or can be reached by email (ucentral@utrgv.edu) or telephone: (888) 882-4026. In addition to financial aid, U Central can assist students with registration and admissions.
Students seeking academic help in their studies can use university resources in addition to an instructor's office hours. University Resources include the Advising Center, Career Center, Counseling Center, Learning Center, and Writing Center. The centers provide services such as tutoring, writing help, critical thinking, study skills, degree planning, and student employment. Locations are:

<table>
<thead>
<tr>
<th>Center Name</th>
<th>Brownsville Campus</th>
<th>Edinburg Campus</th>
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<tbody>
<tr>
<td>Advising Center</td>
<td>BMAIN 1.400</td>
<td>ESWKH 101</td>
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<tr>
<td><a href="mailto:AcademicAdvising@utrgv.edu">AcademicAdvising@utrgv.edu</a></td>
<td>(956) 665-7120</td>
<td>(956) 665-7120</td>
</tr>
<tr>
<td>Career Center</td>
<td>BCRTZ 129</td>
<td>ESSBL 2.101</td>
</tr>
<tr>
<td><a href="mailto:CareerCenter@utrgv.edu">CareerCenter@utrgv.edu</a></td>
<td>(956) 882-5627</td>
<td>(956) 665-2243</td>
</tr>
<tr>
<td>Counseling Center</td>
<td>EUCTR 109</td>
<td>BSTUN 2.10</td>
</tr>
<tr>
<td><a href="mailto:Counseling@utrgv.edu">Counseling@utrgv.edu</a></td>
<td>(956) 665-2574</td>
<td>(956) 882-3897</td>
</tr>
<tr>
<td>Learning Center</td>
<td>BMSLC 2.118</td>
<td>ELCTR 100</td>
</tr>
<tr>
<td><a href="mailto:LearningCenter@utrgv.edu">LearningCenter@utrgv.edu</a></td>
<td>(956) 882-8208</td>
<td>(956) 665-2585</td>
</tr>
<tr>
<td>Writing Center</td>
<td>BUBLB 3.206</td>
<td>ESTAC 3.119</td>
</tr>
<tr>
<td><a href="mailto:WC@utrgv.edu">WC@utrgv.edu</a></td>
<td>(956) 882-7065</td>
<td>(956) 665-2538</td>
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