Physics 1401 Fall 2018

Section: ....................
Instructor: ............
Dr. Nicholas Dimakis
Office Room: ESCNE 3.617 (Edinburg campus), telephone: (956) 665-8761, Email: nicholas.dimakis@utrgv.edu
Office Hours: ............
Posted on ESCNE 3.617 or by Appointment. More instructions are posted on Blackboard.
Meeting Time: ............
No meeting time - Online class
Text: .....................
The textbook is optional. If you choose to purchase it then it is recommended to bundle it with Mastering Physics. In this case, you need the "Physics Plus Mastering Physics with Pearson eText Access Card Package”, by James S. Walker, 5th Edition with ISBN-13: 9780321993762. Mastering Physics is mandatory. Homework assignments and EXAMs will be under Mastering in Physics. You should access Mastering Physics by clicking any Mastering Physics link from blackboard. Please keep in mind that there is no course ID. If you have any login issues/questions with Mastering Physics please contact Olinda.Rubio@Pearson.com.

Laboratory work: Laboratory is required. If you fail the lab you fail the course.

Course Description and Prerequisites. PHYS 1401 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. The prerequisite for Physics 1401 is MATH 1414 or MATH 1314.

Vectors will be used extensively throughout this course and the following course requires understanding of the fundamental ideas of geometry and trigonometry. Elementary physics and mathematics texts are available in the library. The laboratory and lecture parts of the course will be integrated as much as possible. On occasion, however, the topics in laboratory will not follow the order in which the lecture is organized.

Learning Objectives/Outcomes for the Course
The PHYS 1401 course objectives are:
1. Understand and apply method and appropriate technology to the study of natural sciences;
2. Recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry and to communicate findings, analyses, and interpretation both orally and in writing
3. Identify and recognize the differences among competing scientific theories
4. Demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies
5. Demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.

Learning Objectives for Core Curriculum Requirements. The PHYS 1401 course is a core course and satisfies the THECB outcomes of Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, Teamwork, Social Responsibility, and Personal Responsibility.

Homework: Homework assignments will be assigned using Mastering Physics.

PowerPoint Project: A PowerPoint project is required for this course. The project topic must be related to the course material. The instructor proposes topics from an everyday experience and a group of students develops a PowerPoint presentation on this topic. Examples are: Physics of Martial Arts, Physics of the Rollercoaster, sending a Rocker to Mars, Walking on Water, etc. Maximum number of students per group is 3. Solo presentations are allowed.

Structure of the PowerPoint project
These presentations must contain:
1. A title slide with ALL names of students participating. The SAME names must appear in the submission message.
2. A slide titled “Outline” where you must outline the main topics discussed.
3. A slide titled Conclusions.
4. No more than 15 slides and not less than 12.
5. Videos and pictures are strongly encouraged to be included.
6. Math should be kept to minimum.

Discussion Groups: This is an interactive class and participation in the discussion groups is required. The instructor set a topic related to the course and students express their opinions. Students must provide information (e.g., links) that support their answers. Answers with a single of few words are not accepted (i.e., “Agree”, “Yes/No”, etc.). You must provide links that support your arguments. I respond to each individual post and all students will be able to see all responses. In the case that the student response is not fully correct, I provide comments and suggestions for resubmissions, which must be posted within 2 business days from my comments.
Grading Policies

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project (completed through Blackboard)</td>
<td>15 %</td>
</tr>
<tr>
<td>Term Exams (2 out of 3, completed through Mastering Physics)</td>
<td>20 %</td>
</tr>
<tr>
<td>Final Exam (completed through Mastering Physics)</td>
<td>20 %</td>
</tr>
<tr>
<td>Discussion Groups (completed through Blackboard)</td>
<td>15%</td>
</tr>
<tr>
<td>Homework Assignments (completed through Blackboard)</td>
<td>10 %</td>
</tr>
<tr>
<td>Laboratory Part (administered separately)</td>
<td>20 %</td>
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</table>

Letter Grading

- **A:** overall percent $\geq 85$
- **B:** $75 \leq$ overall percent $< 85$
- **C:** $65 \leq$ overall percent $< 70$
- **D:** $55 \leq$ overall percent $< 65$
- **F:** overall percent $< 55$

Late policies

Late policies per assignment are described below:

**Discussions:** For up to 4 calendar days, a late submission reduces the grade of the late-submitted discussion by 50 %. Submissions after 5 calendar days are not accepted.

**Term Exams and Assignments:** Students may request late submissions by emailing the instructor (nicholas.dimakis@utrgv.edu) before the due date stating the reasons for this request.

**Final Exam:** NO late submissions are possible.

**Project:** Students may request late submissions by emailing the instructor (nicholas.dimakis@utrgv.edu) before the due date stating the reasons for this request.
## PHYS1401 Fall 2018 Schedule

<table>
<thead>
<tr>
<th>Days</th>
<th>Chapters Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 27, 2018 - August 31, 2018</td>
<td>Ch. 1. Introduction to Physics Ch. 2. One-Dimensional Kinematics</td>
</tr>
<tr>
<td>September 4, 2018 - September 7, 2018</td>
<td>Ch. 3. Vectors in Physics</td>
</tr>
<tr>
<td>September 10, 2018 - September 14, 2018</td>
<td>Ch. 4. Two-Dimensional Kinematics</td>
</tr>
<tr>
<td>September 17, 2018 - September 21, 2018</td>
<td>Ch. 5. Newton’s Laws of Motion</td>
</tr>
<tr>
<td>September 24, 2018 - September 28, 2018</td>
<td>Ch. 6. Applications of Newton’s Laws</td>
</tr>
<tr>
<td>October 1, 2018 - October 5, 2018</td>
<td>Ch. 7. Work and Kinetic Energy</td>
</tr>
<tr>
<td>October 8, 2018 - October 12, 2018</td>
<td>Ch. 8. Potential Energy and Conservation of Energy</td>
</tr>
<tr>
<td>October 15, 2018 - October 19, 2018</td>
<td>Ch. 9. Linear momentum and Collisions</td>
</tr>
<tr>
<td>October 22, 2018 - October 26, 2018</td>
<td>Ch. 10. Rotational Kinematics and Energy</td>
</tr>
<tr>
<td>October 29, 2018 - November 2, 2018</td>
<td>Ch. 11. Rotational Dynamics and Static Equilibrium</td>
</tr>
<tr>
<td>November 5, 2018 - November 9, 2018</td>
<td>Ch. 12 Gravity</td>
</tr>
<tr>
<td>November 12, 2018 - November 16, 2018</td>
<td>Ch. 13. Oscillations about Equilibrium</td>
</tr>
<tr>
<td>November 19, 2018 - November 21, 2018</td>
<td>Ch. 14 Waves and Sound</td>
</tr>
<tr>
<td>November 26, 2018 - November 30, 2018</td>
<td>Ch. 15 Fluids</td>
</tr>
<tr>
<td>December 5, 2018</td>
<td>PowerPoint Project (completed through Blackboard)</td>
</tr>
<tr>
<td>December 7, 2018</td>
<td>Final EXAM (completed through Mastering Physics)</td>
</tr>
</tbody>
</table>

Exams and homework assignments schedule is posted in Mastering Physics. Discussions schedule is posted in Blackboard.

### Calendar of Activities

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 2018 include:

- **August 27**: First day of classes
- **August 30**: Last day to add a course or register for fall 2018
September 3  Labor Day – NO classes
November 14  Last day to drop a course; will count toward the 6-drop rule
November 22 - 24  Thanksgiving Holiday – NO classes
December 6  Study Day – NO classes
December 7 - 13  Final Exams
December 14 – 15  Commencement Exercises

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 suffer 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 Cortez Hall Room 129 and can be contacted by phone at (956) 882-7374 (Voice) or via email at ability@utrgv.edu.
Edinburg Campus: Student Accessibility Services is located in 108 University Center and can be contacted by phone at (956) 665-7005 (Voice), (956) 665-3840 (Fax), 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:

Module 1  October 4 – 10
Module 2  November 29 – December 5
Full Fall Semester  November 15 – December 5

ATTENDANCE.
Students are expected to attend all scheduled classes by regularly login in to blackboard 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 INTEGRITY:**
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 the Dean of Students.

**SEXUAL HARASSMENT, DISCRIMINATION, and VIOLENCE:**
In accordance with UT System regulations, your instructor is a “Responsible Employee” for reporting purposes under Title IX regulations and so must report any instance, occurring during a student’s time in college, of sexual assault, stalking, dating violence, domestic violence, or 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](http://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 and discrimination.

**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 Learning Center, Writing Center, Advising Center and Career Center. The centers provide services such as tutoring, writing help, critical thinking, study skills, degree planning, and student employment. Locations are:

- Learning center: BSTUN 2.10 (Brownsville) or ELCTR 100 (Edinburg)
- Writing center: BLIBR 3.206 (Brownsville) or ESTAC 3.119 (Edinburg)
- Advising center: BMAIN 1.400 (Brownsville) or ESWKH 101 (Edinburg)
- Career center: BCRTZ 129 (Brownsville) or ESSBL 2.101 (Edinburg)