Course Title: PHYS 2113 – GENERAL PHYSICS I

Course Prefix: PHYS **Course No.:** 2113 **Section No.:** P02

Department of | **Physics** | **College of** | **Arts and Sciences**

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Office Hours: | M, W, F 11 AM – 1 PM
Virtual Office Hours: | N/A

Course Location: | E.E. Obanion Science Building Room 301
Class Meeting Days & Times: | MWF 9 AM
Catalog Description: | Credit 3 semester hours. An algebra and trigonometry based introduction to general physics with topics to include measurement system, motion, vector addition, Newton's laws of motion, statics, dynamics, mechanical energy, gravitation, momentum, circular and angular motion, and torque. Prerequisite: MATH 1113 or MATH 1115 or MATH 1123. *

Prerequisites: | MATH 1113 or MATH 1115 or MATH 1123
Co-requisites: |

Required Text: | Essentials College Physics, Volume 1 by Andrew Rex and Richard Wolfson. Published by Addison-Wesley (ISBN # 978-0-321-61116-1 for Volume 1).

Recommended Text/Readings: |

Access to Learning Resources: | PVAMU Library:
phone: (936) 261-1500;
web: http://www.pvamu.edu/pages/3585.asp
University Bookstore:
phone: (936) 261-1990;
web: https://www.bkstr.com/Home/10001-10734-1?demoKey=d

Course Goals or Overview:

The goal of this course is to provide students the necessary background in introductory college physics. It is designed for students who plan to major or specialize in one of the areas of medicine, veterinary, or in one of the many areas of technology, including computer science. At least one year of physics is the minimum prerequisite for specialization in one of these fields.

Course Outcomes/Objectives Upon completion of this course, it is expected that the students will gain enough knowledge of the theory covered to apply it to the solution of a wide range of practical problems that involve physics. Hopefully this will help the students to better understand the theory of operations of many instruments and devices that they will encounter as they become employed in the various fields mentioned earlier. In addition, it will help them solve new problems that they will possibly meet on their various fields of employment that require basic knowledge of physics.

At the end of this course, the student will…

		Core Curriculum Objective
1	Students will demonstrate knowledge of algebra and solve problems involving algebraic equations, systems of equations, quadratic equations and abstract manipulation of variables	Critical Thinking & Empirical/Quantitative skills
2	Students will develop proficiency in the methods of basic vector operations: addition, subtraction, dot product, cross product and calculations using i, j,	Critical Thinking & Empirical/Quantitative Skills

	and k notation and learn to apply these methods to general physics	
3	Students will understand and demonstrate knowledge by writing and speaking processes through invention, organization, drafting, correcting and presentation of acquired knowledge	Communication and Personal Responsibility
4	Students will demonstrate knowledge by understanding the importance of specifying audience and purpose through the selection of appropriate communication choices	Empirical/Quantitative skills and Communication
5	Students will demonstrate knowledge and solve problems dealing with mechanical motion, laws of motion, conservation principles and waves	Empirical/Quantitative skills and Communication
6	Students will demonstrate their mastery of these areas through collecting and analyzing data, computer simulations, class-room discussions and participating effectively in groups with emphasis on reflective thinking	Teamwork and Communication

Course Requirements & Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Exams – written tests designed to measure knowledge of presented course material
Exercises – written assignments designed to supplement and reinforce course material
Projects – web assignments designed to measure ability to apply presented course material
Class Participation – daily attendance and participation in class discussions

Grading Matrix

Instrument	Value (points or percentages)	Total
Assignments	4 assignments at 5 each	20
Quizzes	4 quizzes at 5 points each	20
Other Exams	2 exams at 20 points each	40
Mid Term Exam	20	20
Class Participation/ Discussion	10	10
Final Exam	20	20
Total:		**130**

Grade Determination:

Based into a percentage scale of total points earned relative to the maximum of points available, the grading system is as follows:

A = 90% – 100%;
B = 80% – 89%;
C = 70% – 79%;
D = 60% – 69%;
F = 59% or below

Course Procedures

POLICIES: This course uses the lecture format. Selected materials in each chapter will be covered in lecture. You should read the entire assigned chapter before class. The lecture will not replace reading the materials. The lecture will be to amplify and explain the materials in the textbook. Homework problems will be assigned during the entire semester for each chapter covered. It is expected that the student solve these problems prior to the next class meeting. Any student unable to solve a particular assigned problem should contact the professor. Pop quizzes may be given occasionally on covered materials. It is expected that you will need to spend at least two hours studying outside the class for each hour spent in class. That means you should plan to devote a minimum of six hours per week for this class.

PERFORMANCE EVALUATION AND GRADING: There will be four examinations during the semester including a final

exam. Examinations will consist of solving quantitative and/or qualitative physics problems. All examinations are closed book and the final exam may be comprehensive. The use of calculators is permitted and encouraged. Two exams are given during the first half of the semester and two more exams during the second half of the semester. Each exam is worth 20 points and in total the exams contribute 80 points of your final grade. Makeup examinations are given ONLY for a university-approved absence verified in writing. The remaining 20 points of your final grade will come from two homework assignments. Upon the discretion of the Instructor, bonus points will be available from quizzes, classroom attendance rolls (if applicable) and any special project(s) together, any or some of them chosen by the Instructor.

Submission of Assignments: Assignments should be turned in on their due dates. No late homework assignments will be accepted.

Formatting Documents:
Microsoft Word is the standard word processing tool used at PVAMU. If you're using other word processors, be sure to use the "save as" tool and save the document in either the Microsoft Word, Rich-Text, or plain text format.
Exam Policy
Exams should be taken as scheduled. No makeup examinations will be allowed except under documented emergencies (See Student Handbook).

Professional Organizations and Journals : N/A

References: N/A

Semester Calendar

Week One: Topic	Measurements in physics
Chapter (s):	**Ch.1**
Assignment (s):	Read material in textbook
Week Two: Topic	Motion in one dimension
Chapter (s):	**Ch. 2**
Assignment (s):	Read material in textbook
Week Three: Topic	Motion in two dimensions
Chapter (s):	**Ch. 3**
Assignment (s):	Assignment 1
Week Four: Topic	Force and Newton's laws of motion
Chapter (s):	**Ch. 4**
Assignment (s):	Read material in textbook
Week Five: Topic	Force and Newton's laws of motion (continued)
Chapter (s):	**Ch. 4**
Assignment (s):	Assignment 2
Week Six: Topic	Work and energy
Chapter (s):	**Ch. 5**
Assignment (s):	Read material in textbook
Week Seven: Topic	Work and energy (continued)
Chapter (s):	**Ch. 5**
Assignment (s):	Assignment 3
Week Eight: Topic	Momentum and Collisions

Chapter (s):	**Ch. 6**
Assignment (s):	Read material in textbook
Week Nine: Topic	Momentum and Collisions (continued)
Chapter (s):	**Ch. 6**:
Assignment (s):	Assignment 4
Week Ten: Topic	Rotational Motion
Chapter (s):	**Ch. 8**
Assignment (s):	Read material in textbook
Week Eleven: Topic	Rotational Motion (continued)
Chapter (s):	**Ch. 8**
Assignment (s):	Assignment 5
Week Twelve: Topic	Gravitation
Chapter (s):	**Ch. 9**
Assignment (s):	Read material in textbook
Week Thirteen: Topic	Oscillations
Chapter (s):	**Ch. 7**
Assignment (s):	Assignment 6
Week Fourteen: Topic	Solids and Fluids
Chapter (s):	**Ch. 10**
Assignment (s):	Read material in textbook
Week Fifteen: Topic	Review , study, and final exam days
Chapter (s):	**All Chapters**
Assignment (s):	Final Exam

University Rules and Procedures

Disability statement (See Student Handbook):
Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

Academic misconduct (See Student Handbook):
You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

Forms of academic dishonesty:

1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.

2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.

3. Fabrication: use of invented information or falsified research.

4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else's words, ideas, or data as one's own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one's own work also constitutes plagiarism.

Nonacademic misconduct (See Student Handbook)
The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor's ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual misconduct (See Student Handbook):
Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

Attendance Policy:
Prairie View A&M University requires regular class attendance. Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in assignment of a grade of "F". Absences are accumulated beginning with the first day of class.

Student Academic Appeals Process
Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.

Technical Considerations for Online and Web-Assist Courses

***Minimum* Hardware and Software Requirements:**

-Pentium with Windows XP or PowerMac with OS 10
-Wireleess or network access
-Internet provider with SLIP or PPP
-8X or greater CD-ROM
-256 MB Ram
-Hard drive with 40MB available space
-15" monitor, 800x600, color or 16 bit
-Sound card w/speakers
-Microphone and recording software
-Keyboard & mouse
-Microsoft Internet Explorer ver. 5.0 /plug-ins, Moczilla Firefox
-Participants should be proficient in the following:
  ·Sending and receiving email
  · Internet searching
  ·Microsoft Word
  ·Acrobat PDF Reader
  ·Windows or Mac O.S.

Netiquette (online etiquette): students are expected to participate in all discussions and virtual classroom chats when directed to do so. Students are to be respectful and courteous to others in the discussions. Foul or abusive language will not be tolerated. When referring to information from books, websites or articles, please use APA standards to reference sources.

Technical Support: Students should call the Prairie View A&M University Helpdesk at 936-261-2525 for technical issues with accessing your online course. The helpdesk is available 24 hours a day/7 days a week. For other technical questions regarding your online course, call the Office of Distance Learning at 936-261-3290 or 936-261-3282

Communication Expectations and Standards:
All emails or discussion postings will receive a response from the instructor within 48 hours.

You can send email anytime that is convenient to you, but I check my email messages continuously during the day throughout the work-week (Monday through Friday). I will respond to email messages during the work-week by the close of business (5:00 pm) on the day following ***my receipt*** of them. Emails that I receive on Friday will be responded to by the close of business on the following Monday.

Submission of Assignments:
Assignments, Papers, Exercises, and Projects will distributed and submitted through your online course. Directions for accessing your online course will be provided. Additional assistance can be obtained from the Office of Distance Learning.

Discussion Requirement:
Because this is an online course, there will be no required face to face meetings on campus. However, we will participate in conversations about the readings, lectures, materials, and other aspects of the course in a true seminar fashion. We will accomplish this by use of the discussion board.

Students are required to log-on to the course website often to participate in discussion. It is strongly advised that you check the discussion area daily to keep abreast of discussions. When a topic is posted, everyone is required to participate. The exact use of discussion will be determined by the instructor.

It is strongly suggested that students type their discussion postings in a word processing application and save it to their PC or a removable drive before posting to the discussion board. This is important for two reasons: 1) If for some reason your discussion responses are lost in your online course, you will have another copy; 2) Grammatical errors can be greatly minimized by the use of the spell-and-grammar check functions in word processing applications. Once the post(s) have been typed and corrected in the word processing application, it should be copied and pasted to the discussion board.