

Course Title: GENERAL PHYSICS II

Course Prefix: PHYS

Course No.: 2123

Section No.: P01

Department of | Physics

College of | Arts & Sciences

Instructor Name: Premkumar B. Saganti, Ph. D.
Office Location: E.E. O'Banion (New) Science Building, Room 33AD
Office Phone: 936-261-3134
Fax: 936-261-3149
Email Address: pbsaganti@pvamu.edu
U.S. Postal Service Address: Prairie View A&M University
P.O. Box | 519
Mail Stop | 2230
Prairie View, TX 77446

Office Hours: | Tuesday and Thursdays 11:00 AM – 12:30 PM
Virtual Office Hours: | Via email

Course Location: | Room-301
Class Meeting Days & Times: | Tue / Thurs 9:30 AM – 10:50 AM

Catalog Description: | Credit 3 semester hours. A continuation of algebra and trigonometry based General Physics I course includes sound, heat, electricity, magnetism, and optics. Prerequisite: PHYS 2113 or PHYS 2513.

Prerequisites: | **PHYS-2113**
Co-requisites: | **PHYS-2121**

Required Text: | **Essential College Physics** by Rex and Wolfson
ISBN: 978-0-321-61116-1 (McGraw-Hill)

Recommended Text/Readings: | **Essentials of College Physics by Serway and Vuille**
ISBN: 0-495-10619-4 (Thomson/Brooks-Cole)

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 primary goal of this course is to understand the fundamental concepts in the fields of electricity-magnetism, light, and modern physics. The primary outcome of this course is to achieve knowledge in three major areas of advanced physics and their implications in the scientific and engineering advancements.

Course Outcomes/Objectives

		Core Curriculum Objective
1	Students will work on selected problems by inquiry based methods	Critical Thinking
2	Students will discuss and explain fundamental general physics concepts	Communication
3	Students will understand the manipulation and analysis of numerical data	Empirical and Quantitative
4	Students will participate effectively in working on group projects	Teamwork
5	Students will work on assigned research topics and provide as short reports	Communication
6	Students will work on advanced application problems	Empirical and Quantitative

Course Requirements & Evaluation Methods

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

- Homework Problems** – assigned problems to assess and reinforce mathematical calculations
- Research Topics** – written assignments designed to supplement and reinforce course material
- In-Class Exams** – written tests designed to measure knowledge of presented course material
- Group Presentation** – ability to prepare and present applications of discussed course material
- Mid Term and Final Exams** - written and comprehensive problem sets of the course material
- Class Participation** – daily attendance and participation in class discussions

Grading Matrix

Instrument	Value (points or percentages)	Total
Homework Problems	5 assignments at 10 points each	50
Research Topics	5 assignments at 10 points each	50
In-Class Exams / Quizzes	2 exams / quizzes at 25 points each	50
Group Presentation	1 project	25
Mid Term Exam	50	50
Final Exam	50	50
Class Participation/ Discussion	25	25
Total:		300

Grade Determination:

- A = 250 – 300 pts;
- B = 200 – 249 pts;
- C = 150 – 199 pts;
- D = 100 – 149pts;
- F = 99 pts or below

Course Procedures

Submission of Assignments:

Assigned Chapter Problems will be submitted according to the posted due dates. Assigned Research Topics will be provided via eCourses according to the posted due dates.

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

IEEE, SPS, and OSA

References

Physics, 6th Edition by Cutnell and Johnson
ISBN: 0471-15183-1 (John Wiley & Sons)

Semester Calendar

Week One: Topic	Electric Forces and Fields	
Chapter (s):	Ch-15	
Assignment (s):		Assigned Problems from Ch-15
Week Two: Topic	Electric Forces and Fields	
Chapter (s):	Ch-15	
Assignment (s):		Assigned Topics for Research:
Week Three: Topic	Electric Energy and Capacitance	
Chapter (s):	Ch-16	
Assignment (s):		Assigned Problems from Ch-16
Week Four: Topic	Electric Energy and Capacitance	
Chapter (s):	Ch-16	
Assignment (s):		Exam-01: In-Class Test
Week Five: Topic	Current and Resistance	
Chapter (s):	Ch-17	
Assignment (s):		Assigned Problems from Ch-17
Week Six: Topic	Current and Resistance	
Chapter (s):	Ch-17	
Assignment (s):		Assigned Topics for Research
Week Seven: Topic	Electric Circuits	
Chapter (s):	Ch-18	
Assignment (s):		Assigned Problems from Ch-18
Week Eight: Topic	Electric Circuits	
Chapter (s):	Ch-18	
Assignment (s):		Exam-02: Mid-Term
Week Nine: Topic	Spring Break	
Chapter (s):	n/a	
Assignment (s):	n/a	
Week Ten: Topic	Magnetic Forces and Fields	
Chapter (s):	Ch-19	
Assignment (s):		Assigned Problems from Ch-19
Week Eleven: Topic	Magnetic Forces and Fields	
Chapter (s):	Ch-19	
Assignment (s):		Assigned Topics for Research
Week Twelve: Topic	Electromagnetic Induction	
Chapter (s):	Ch-20	
Assignment (s):		Assigned Problems from Ch-20
Week Thirteen: Topic	Electromagnetic Induction	
Chapter (s):	Ch-20	
Assignment (s):		Exam-03: In-Class Test
Week Fourteen: Topic	Electromagnetic Waves	
Chapter (s):	Ch-21	
Assignment (s):		Assigned Problems from Ch-21
Week Fifteen: Topic	Electromagnetic Waves	
Chapter (s):	Ch-21	
Assignment (s):		Assigned Topics for Research
Week Sixteen: Topic	Course Review	
Chapter (s):		
Assignment (s):		
Week Seventeen: Topic	FINAL EXAM SCHEDULE	
Chapter (s):		
Assignment (s):		Exam-04: 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
- Wireless 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, Mozilla 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.