



**PRAIRIE VIEW A&M UNIVERSITY
DEPARTMENT OF PHYSICS**

**PHYS-2123: GENERAL PHYSICS II
COURSE SYLLABUS
SPRING-2010**

Instructors: Prof. Gary M. Erickson (P01)
Prof. Premkumar B. Saganti (P02)

Offices: NSCI-330G (Erickson), NSCI-330AD (Saganti)

Phones: 936-261-3135 (Erickson); 936-261-3134 (Saganti)

E-mails: gmerickson@pvamu.edu, pbsaganti@pvamu.edu

Lecture Sessions: P01 (CRN 20407) – MWF, 9:00–9:50 AM, NSCI-A103
P02 (CRN 20501) – TR, 9:30 – 10:50 AM, NSCI-301

Office Hours: TBA

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

PREREQUISITES: MATH 1124; PHYS 2513

COURSE DESCRIPTION:

This 3 credit hour course is a continuation of the algebra-based introductory course in general physics with topics from electricity, magnetism and light. Specific topics include: electric force and fields, electric potential, electrical circuits, magnetic force and fields, electromagnetic induction, reflection and refraction of light, interference and diffraction of light.

COURSE OBJECTIVES:

The objectives of this course are for students to develop a conceptual understanding of physics principles along with their reasoning and problem solving abilities. The primary goal of this course is to understand the fundamental concepts of electricity and magnetism and the behavior of light. The primary outcome of this course is to achieve knowledge in three major areas of basic physics and their implications for other fields of science and technology.

PERFORMANCE EVALUATION and GRADING:

- **Lectures:** Attendance of lectures is expected, and students are expected to arrive on time, stay for the entire class period, and actively participate. (See the University attendance policy below.) The lecture does not replace reading the materials. The lecture is intended to expand, explain, and offer a different perspective on the material in the textbook.
- **Homework:** Homework problems will be assigned on a timely basis. It is the responsibility of the student, individually or within a group, to complete each homework assignment by the due date. The instructor is available during office hours to assist students and tutors are provided by the Physics Department. It is essential that the student understands the solution to problems if he/she is to succeed in this course; failure to understand homework problems will likely result in a disastrous outcome on exams.
- **Exams:** Three unit exams and a final exam are scheduled. Only calculators and no other electronic equipment are permitted during the exams.
- **Grading:** Combined attendance and homeworks, each unit exam and the final exam each contribute 20% toward the final numerical grade. *Scores will not be curved.* Physics is challenging for most students, and a cumulative performance of 25% is required for a “D”, 40% for a “C”, 50% for a “B”, and 65% for an “A” as the potential final grade in the course.
- **Late Homework or Missed Tests:** Late homework will be penalized at the rate of 15% per calendar day. This penalty may be waived only for a valid emergency. A unit exam may be excused or made-up at the instructor’s discretion and only in the case that the student has a valid excuse. Please, inform the instructor in advance of a test or exam if there is a valid schedule conflict. In the event that an emergency occurs that causes a test or exam to be missed, it is expected that the student provide written evidence and schedule a make-up test or exam for as soon as possible following the emergency. A make-up test will not be given after the next class period following the scheduled time for a unit exam.

GRADE OF “I”:

A grade of “I” may be given in cases of documented emergencies or tragedies that prohibit a student from completing a course. In order to receive a grade of “I”, approval must be granted by the Department Head and College Dean prior to the final examination time.

Supplementary Material and Help:

1. A comprehensive set of course material taught and tested will also be made available through WebCT and can be accessed via <http://ecourses.pvamu.edu/>
2. Selected information and material will also be made available through the website - <http://www.pvamu.edu/pages/2811.asp>
3. Tutorial sessions are available in room NSCI-324 through the Physics Department for individual problem discussions.
4. An additional reference textbook is **Physics, 6th Edition** by Cutnell and Johnson, ISBN: 0471-15183-1 (John Wiley & Sons).

CLASS SCHEDULE

(Schedule Subject to Change)

<u>Week</u>	<u>Topic</u>	<u>Note</u>
1 (Jan 19 – 22)	Ch. 15: Electric Forces and Electric Fields	Late Registration & Drop/Add Ends on Jan 22 for Undergrad. & on Jan 23 for Graduate Students No Classes Jan 18, NLK Day
2 (Jan 25 – 29)	Ch. 15: (continued)	Jan 27: General Student Assembly
3 (Feb 1 – 5)	Ch. 16: Electric Energy and Capacitance	Feb 3: Last day to withdraw from course w/o record
4 (Feb 8 – 12)	Ch. 16: (continued)	Exam #1 (on Ch. 15-16)
5 (Feb 15 – 19)	Ch. 17: Current and Resistance	
6 (Feb 22 – 26)	Ch. 18: Electric Circuits	
7 (Mar 1 – 5)	Ch. 18: (continued)	Exam #2 (on Ch. 17-18)
8 (Mar 8 – 12)	Ch. 19: Magnetic Forces and Fields	
9 (Mar 15 – 19)	Spring Break	No Classes
10 (Mar 22 – 26)	Ch. 19: (continued)	
11 (Mar 29 – Apr 1)	Ch. 20: Electromagnetic Induction	No Class on Apr 2 (Good Friday/Easter)
12 (Apr 5 – 9)	Ch. 21: Electromagnetic Waves	Apr 5: Last day to withdraw from course with "W" Exam #3 (on Ch. 19-21.5)
13 (Apr 12 – 16)	Ch. 21: (continued)	
14 (Apr 19 – 23)	Ch. 22-24: Reflection and Refraction	
15 (Apr 26 – 30)	Ch. 22-24: Interference and Diffraction	
16 (May 3 – 7)	Review Days—M & T. Study Days—W & R Final Exams Start Friday, May 7	Final Exam: See Final Exam Schedule
17 (May 10 – 12)	Final Exam Period Continued	

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) at (936) 857-2693/2694 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.