



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

**PHYS-2123: GENERAL PHYSICS II (Dr. Saganti)  
COURSE SYLLABUS  
FALL-2009**

**Professor:** Premkumar B. Saganti, Ph. D.

**Office:** Room 300-AD, New Science Building

**Phone:** 936-261-3134

**E-mail:** [pbsaganti@pvamu.edu](mailto:pbsaganti@pvamu.edu)

**Lecture Sessions:** Tuesday/Thursday  
9:30 – 10:50 AM  
Room-NSCI-101

**Office Hours:** Tuesday/Thursday 11:00 AM – 12:00 PM

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

Reference Book: Physics, 6<sup>th</sup> Edition by Cutnell and Johnson  
ISBN: 0471-15183-1 (John Wiley & Sons)

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**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. A series of tutorial sessions are also being made available through the physics department for individual problem discussions.

**COURSE DESCRIPTION:**

An algebra based advanced course in general physics with topics primarily in three main areas of physics - (i) Electricity-magnetism with specific topics such as: electric forces, potential energy, circuits, and electromagnetic induction; (ii) Light with topics such as: reflection, refraction and

interference; and (iii) Modern physics with emphasis on topics such as: atomic structure, introductory nuclear physics and radiation.

**COURSE GOAL and OUTCOME:**

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.

**PERFORMANCE EVALUATIONS and GRADING:**

- A set of problems will be assigned from each chapter discussed in the class and are expected to be worked-out independently / individually and turned in for credit by the specified time.
- A list of short summaries will be assigned on selected subject areas with emphasis on the current advancements and applications.
- There will be two in-class tests in addition to the scheduled mid-term and final examination.
- GRADES → **A:** 90-100;    **B:** 80-89;    **C:** 70-79;    **D:** 60-69;    **F:** <60

**ATTENDANCE POLICY:**

Class will start and end at the prescribed times. Attendance in every class is expected and is the student's responsibility. Absence or tardiness may result in lowered grades. Excessive absenteeism, whether EXCUSED or UNEXCUSED, may result in a student's course grade being reduced or assignment of a grade of "F". Absences are accumulated beginning with the first day of class. More detailed information is available from the **Registration and Term Information Fall 2005** ([http://acad.pvamu.edu/content/registrar/files/fall2005\\_revised.pdf](http://acad.pvamu.edu/content/registrar/files/fall2005_revised.pdf)).

**ASSISTANCE FOR STUDENTS WITH DISABILITIES:**

Lecture class room and additional tutorial session will all be held in New Science building and this building is accessible to people with disabilities. My office is also located in New Science building (Room 330-AD). For any further clarification and requirements, you may contact the Office of Disability Services on campus located in Evans Hall Room 315, Tel: (936) 857-2610.

**CONDUCT AND ETHICS:**

A strict code of ethics will be imposed in the class room lecture sessions, in all the examinations, and on all homework assignments. It is imperative that the student will make every effort to ensure that he / she will abide by the university standards and expectations and pledge to refrain from any unethical activity and plagiarism.

## COURSE TIME-LINE

Based on the text book: “*Essentials of College Physics*” by Serway / Vuille

This schedule may be modified as needed –

Week	Date(s)	Topic	Comments
1	31-Aug	<b>Ch. 15:</b> Electric forces and fields	
2	7-Sep	<b>Ch. 15:</b> Electric forces and fields	
	14-Sep	<b>Ch. 16:</b> Electric energy and capacitance	
3			
4	21-Sep	<b>Ch. 17:</b> Current and Resistance	<b>Exam-1: In Class</b>
5	28-Sep	<b>Ch. 18:</b> Electric Circuits	
6	5-Oct	<b>Ch. 18:</b> Electric Circuits	
7	12-Oct	<b>Ch. 19:</b> Magnetic forces and fields	
8	19-Oct	<b>Ch. 19:</b> Magnetic forces and fields	<b>Exam-2: Mid-Term</b>
	26-Oct	<b>Ch. 20:</b> Induced Electromagnetic Induction	
9			
	2-Nov	<b>Ch. 20:</b> Induced Electromagnetic Induction	
10			
11	9-Nov	<b>Ch. 21:</b> Electromagnetic Waves	
12	16-Nov	<b>Ch. 22:</b> Light – reflection	<b>Exam-3: In Class</b>
13	23-Nov	<b>Ch. 23:</b> Light – refraction	
14	30-Nov	<b>Ch. 24:</b> Wave nature of light	
15	7-Dec	<b>Course Review</b>	<b>Course Review</b>
16	14-Dec	<b>Final Examination (12/15/09)</b>	<b>Exam-4: FINAL</b>

(Fall-09 Ver-01: August 31, 2009)

PHYS-2123-P01 (CRN-10760)

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e-Courses: <http://ecourses.pvamu.edu/>