



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

**PHYS-2123-003: GENERAL PHYSICS II
COURSE SYLLABUS
Spring-2007**

Professor: Premkumar B. Saganti, Ph. D.

Office: Room 300-AD, New Science Building

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Lecture Sessions: Tuesday/Thursday 9:30 – 10:50 AM
Room: NSB-A104

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

Text Book: Physics, 6th Edition by Cutnell and Johnson (Wiley)

Supplementary Material and Help:

1. A set of CDs with solutions to problems in the chapters covered from the text book are available in the Coleman Library (on Reserve).
2. A set of binders will also be periodically updated in the Coleman Library (on Reserve) with class notes and other hand-out material.
3. Selected information and test material will also be made available through the website - <http://www.i2i.pvamu.edu/physics/saganti.htm>
4. 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 the knowledge of three areas of advanced physics and its 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 and individually and turned in for credit by the specified time.
- 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).

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:

This schedule may be modified as needed -

<i>Week: Start Date</i>	<i>Topic</i>	<i>Comments</i>
1	15-Jan	Ch. 18: Electric forces and fields
2	22-Jan	Ch. 18: Electric forces and fields
3	29-Jan	Ch. 19: Electric potential energy
4	5-Feb	Ch. 19: Electric potential energy
5	12-Feb	Ch. 20: Electric Circuits
6	19-Feb	Ch. 21: Magnetic forces and fields
7	26-Feb	Ch. 21: Magnetic forces and fields
8	5-Mar	Ch. 22: Electromagnetic induction
9	12-Mar	<i>Spring Break</i>
10	19-Mar	Ch. 22: Electromagnetic induction
11	26-Mar	Ch. 24: Electromagnetic Waves
12	2-Apr	Ch. 25: Light – reflection
13	9-Apr	Ch. 26: Light – refraction
14	16-Apr	Ch. 27: Wave nature of light
15	23-Apr	Course Review
16	30-Apr	Final Examination Period (TBD)

Exam-1: In Class TEST

**Exam-2: Mid-Term Exam
Spring Break**

Exam-3: In Class TEST

Course Review

Exam-4: FINAL Exam (TBD)

COURSE TEACHING PLAN:

Spring-2007 Physics-II PHYS-2123: Dr. Saganti Ver-1 10-Jan-07		Mon	Tuesday		Wed	Thursday		Fri	Sat	Sun	
			9:30	10:50		9:30	10:50				
Wk-1	Electricity & Magnetism	15-Jan	16-Jan	Overview	17-Jan	18-Jan	Ch-18	19-Jan	20-Jan	21-Jan	January
Wk-2		22-Jan	23-Jan	Ch-18	24-Jan	25-Jan	Ch-18	26-Jan	27-Jan	28-Jan	
Wk-3		29-Jan	30-Jan	Ch-19	31-Jan						
Wk-4		5-Feb	6-Feb	Ch-19	7-Feb	8-Feb	TEST	9-Feb	10-Feb	11-Feb	February
Wk-5		12-Feb	13-Feb	Ch-20	14-Feb	15-Feb	Ch-20	16-Feb	17-Feb	18-Feb	
Wk-6		19-Feb	20-Feb	Ch-21	21-Feb	22-Feb	Ch-21	23-Feb	24-Feb	25-Feb	
Wk-7		26-Feb	27-Feb	Ch-22	28-Feb						
Wk-8	Light	5-Mar	6-Mar	Ch-25	7-Mar	8-Mar	Ch-25	9-Mar	10-Mar	11-Mar	March
Wk-9		12-Mar	13-Mar	Spring/B	14-Mar	15-Mar	Spring/B	16-Mar	17-Mar	18-Mar	
Wk-10		19-Mar	20-Mar	Ch-26	21-Mar	22-Mar	Ch-26	23-Mar	24-Mar	25-Mar	
Wk-11		26-Mar	27-Mar	Ch-27	28-Mar	29-Mar	TEST	30-Mar	31-Mar		
Wk-12	Modern Physics	2-Apr	3-Apr	Ch-30	4-Apr	5-Apr	Ch-30	6-Apr	7-Apr	8-Apr	April
Wk-13		9-Apr	10-Apr	Ch-31	11-Apr	12-Apr	Ch-31	13-Apr	14-Apr	15-Apr	
Wk-14		16-Apr	17-Apr	Ch-32	18-Apr	19-Apr	Ch-32	20-Apr	21-Apr	22-Apr	
Wk-15	Review- Week	23-Apr	24-Apr	REVIEW	25-Apr	26-Apr	REVIEW	27-Apr	28-Apr	29-Apr	May
Wk-16	Finals-Week	30-Apr	1-May	FINAL	2-May	3-May	GRADES	4-May	5-May	6-May	

Text Book: *Physics, 6th Edition - Cutnell and Johnson* [ISBN: 0-471-15183-1©2004]
(or) *Physics, 6th Edition, Volume 2* (Chapters17-32) [ISBN 0-471-20939-2]