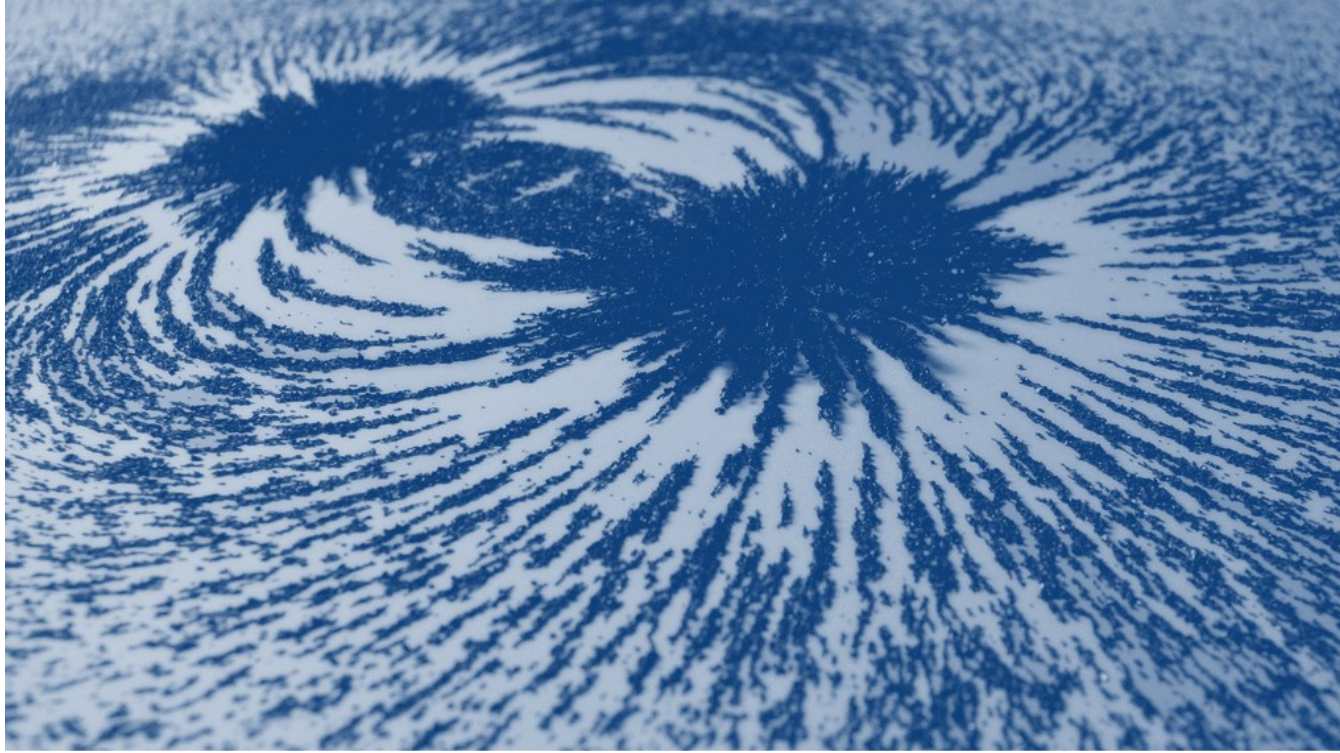


# PRINCIPLES OF PHYSICS II



**PHYS 2401-001**

**MTWRF 8:00-9:50**

**SCI 007**

**SUMMER II 2014**

Photo by Windell Oskay

Calculus-based introductory physics covering electric and magnetic fields, electromagnetic waves, and optics. Partially fulfills core Natural Sciences requirement. Prerequisites: PHYS 1408 and MATH 1452.

## Course Goals

This course is intended to acquaint students with the scientific method and basic laws of physics, to help students develop a better understanding of physical science in general and develop reasoning skills and strategies to prepare them for other upper-division science and engineering classes.

To this end, the course will emphasize a mix of laboratory, conceptual understanding, and standard end-of-chapter homework solving skills.

## Homework, Recitation, and Lab

*Online homework* from the WebAssign website will be assigned. The class key is **ttu 9683 8360**.

Laboratory and recitation will be conducted during the assigned lab and recitation periods.

You will receive one grade for the lecture, recitation, and laboratory combined. They are not separate courses. The laboratory component is essential for your success in this course; if you fail the laboratory portion of this course, you will fail the whole course.

## Instructor

Michael Holcomb  
michael.holcomb@ttu.edu  
806.834.0217

## Office - SCI 009

MWF 10:00-11:00 *or by appointment*

## Required Texts

- Laboratory Manual for Physics 2401 Principles of Physics II
- Physics for Scientists and Engineers with Modern Physics, 8th edition by Serway and Jewett with access to WebAssign (ISBN for bundle is 9781285143811)

*The course will cover material from chapters 23-38 in the text, time permitting.*

## Expected Learning Outcomes

Upon successful completion of this course, students will be able to:

- 1 Understand and apply electromagnetic theory for electric and magnetic fields.
- 2 Use the laws of geometrical and physical optics.
- 3 Understand and manipulate the fundamental elements of basic circuits.
- 4 Be able to apply scientific reasoning to the solution of problems.

The expected learning outcomes for the course will be assessed through performance on selected questions from the homework sets, labs, recitations, exams, and the final exam.

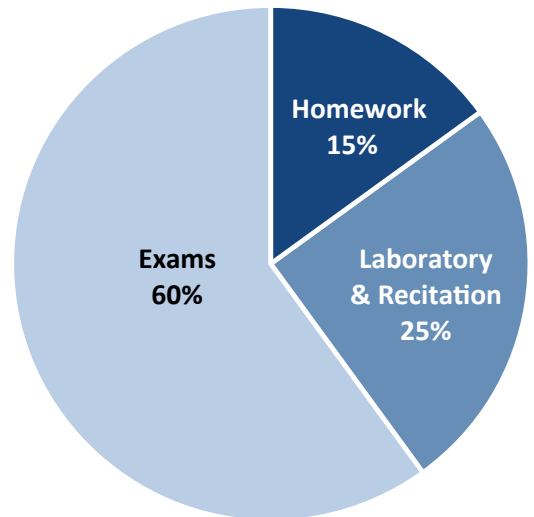
## Grading Policy

The following scores will be accumulated during the course of the semester:

Homework, Laboratory, Recitation, Exam 1, Exam 2, Final Exam, Final Exam.

The course grade will be the weighted average of Homework at 15%, Laboratory and Recitation at 25%, and the three highest exam scores of the four listed above at 20% each. No make up exams will be given.

*Remember: even though the combined laboratory and recitation component of the course is worth 25% of your grade, failing the laboratory portion will result in a failing grade for the whole course.*



## Grading Scale

Your letter grade will be determined on the following scale: (55-64) D; (65-79) C; (80-89) B; (90-100) A.

Grades which are two points on either side of a grade boundary will receive the appropriate +/- qualifier. For example, grades of 78 or 79 earn a C+ while grades of 80 or 81 earn a B-.

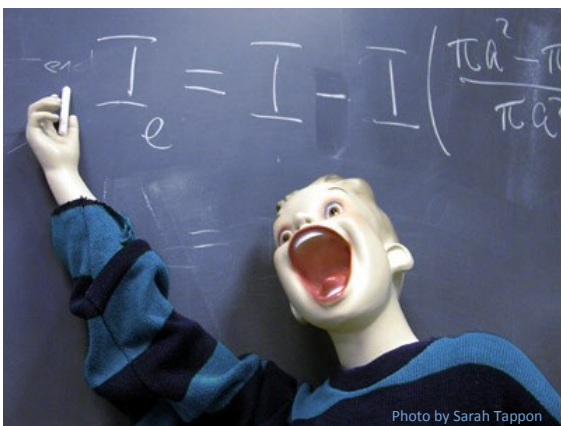


Photo by Sarah Tappan

## Comprehensive Final Exam (Chapters 23-38)

Thursday, August 7, 2014

11:00 a.m. - 1:30 p.m.

SCI 007

## Exam Ground Rules

Calculators are permitted; however, the memory of programmable calculators must be cleared before testing begins. Due to the variance between manufacturers' proprietary software, you as the student will be expected to know how to clear the memory and provide confirmation to the instructor. If you are unable to provide confirmation that the memory has been cleared, then you will be unable to use the calculator during the examination.

All other electronics must be stowed out of sight during the exams. Cell phones are not considered to be calculators regardless of what apps may have been installed. If you are seen attempting to use a cell phone during the exam, you will be asked to leave and issued a zero for the exam without exception.

## Classroom Etiquette

Although attending lecture is highly recommended, whether you choose to take that recommendation seriously is optional. Leaving lecture early or arriving late is considered both rude and distracting. If you have an expected reason to depart early, please inform the lecturer at the beginning of class and sit in a convenient location for leaving without disturbing the class.

All students are expected to be respectful of their peers during lecture by not becoming a distraction. If you become a distraction to other students, then you will be dismissed from class for the day. Some actions, including but not limited to the following, will result in you being considered a distraction to your peers: repeatedly arriving late, reading unrelated material, using your cell phone in any way, visiting with your neighbor, sleeping, eating, "vaping," and the use of any and all tobacco products.

No laptops or any other electronic devices are allowed in class unless the need for such a device for reason of a disability is documented by Access TECH.

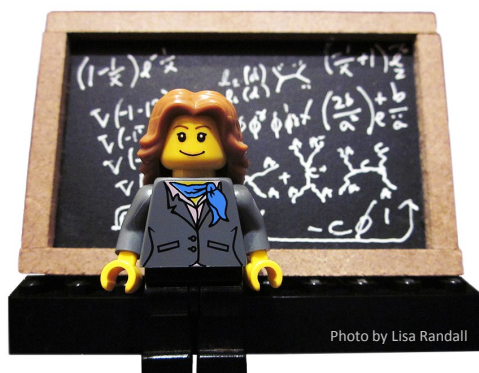
## Strategy for Success

Be prepared! Study your notes, read the material in the text before we cover it in class, and take advantage of the online resources. This will help you keep up, make for more productive classroom interaction, and help keep you prepared for homework, labs, and exams that make up your semester grade. Pay special attention to examples worked in class.

Begin all homework assignments as soon as possible. Don't get behind or wait until the due date to begin. If you are stuck, use available department resources including your course instructor, TAs, and SI.

Don't "blow off" the first exam just because there is a dropped score. The purpose of the dropped score is in case of illness or other extenuating circumstances.

Use pencil and paper to do homework problems and keep your solutions for reviewing prior to exams. The on-line homework might not be viewable after the due date. Once you can work through a problem with your notes, book, study group, etc., be sure you can rework it entirely on your own.



## Academic Integrity

It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and high standard of integrity. The attempt of students to present as their own any work not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offenders liable to serious consequences, possibly suspension. For details, see TTU OP 39.12

## Accommodations

Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's office hours. Please note instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided.

For additional information, you may contact the Student Disability Services office in 335 West Hall (806-742-2405).

## Religious Holidays

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.

## Lecture Preparation

You are expected to bring your assigned texts, paper for notes, and a suitable writing utensil (preferably a pencil with an eraser), a scientific or graphing calculator, and your Texas Tech Student ID with you to every class meeting. You will likely find it helpful to read ahead in the textbook before each class.

## Lecture Attendance

Attendance will be taken but will not affect your grade in the lecture portion of the class. A spirit of honesty will be maintained in the attendance policy. Note that you are responsible for everything that we do in lecture, so it is to your advantage to attend.

As a side note, attending your laboratory and discussion/recitation sections is the only way to get credit for those components of this course. One last reminder: even though the combined laboratory and recitation component of the course is worth 25% of your grade, failing the laboratory portion will result in a failing grade for the whole course.

<b>Tentative Course Schedule</b>			<i>Approximate and subject to change</i>
	<b>Chapter</b>	<b>Events</b>	
<b>Week 1</b>	July 8	23	Classes begin Tuesday, July 8th
	9	23-24	
	10	24-25	
	11	25-26	
			Friday, July 11 - Last day to drop <i>without academic penalty</i>
<b>Week 2</b>	July 14	26	
	15	27	
	16	27-28	
	17	28-29	
	18	29-30	
<b>Week 3</b>	July 21		<b>Monday, July 21 - Exam 1 (Ch. 23 - 28)</b>
	22	30	
	23	31	
	24	31-32	
	25	32-33	
<b>Week 4</b>	July 28	33-34	Monday, July 28 - Last day to drop
	29	34	
	30	35	
	31	35-36	
	Aug. 1		
			<b>Friday, August 1 - Exam 2 (Ch. 29 - 34)</b>
<b>Week 5</b>	Aug. 4	36-37	
	5	37-38	
	6	38	Wednesday, Aug. 6 - Last class day
<b>Comprehensive Final Exam</b>		<b>Thursday, August 7, SCI 007, 11:00 a.m. - 1:30 p.m.</b>	