



INSTRUCTOR | MICHAEL HOLCOMB

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Office | SCI 115

MTWRF 8:00-9:50 *or by appointment*

COURSE OVERVIEW

PHYS 1404 meets MTWRF, 10:00-11:50am in SCI 007.

This course will cover electric fields, magnetic fields, simple circuits, electromagnetic waves, and geometric optics. We may also touch upon modern physics topics if time permits

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

REQUIRED TEXTS

- College Physics Reasoning & Relationships, 2nd Edition by Giordano (ISBN 9780840058195)
We will cover material from chapters 17-30 in the text, time permitting.
- Laboratory Manual - Physics 1404 General Physics II
You must have your laboratory manual before you will be admitted to lab. It is available for purchase from SPS during the first two weeks of the term – buy it before your first laboratory session.

LECTURE

Attendance is mandatory and will be taken daily, but is not a part of 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.

Please thoroughly read the section on the next page regarding classroom etiquette for further information on expectations for lecture attendance.

We will be using Top Hat this semester during lecture. You must purchase access and register yourself at www.TopHat.com. Use both your legal name and your TTU ID (ex: R12345678) when setting up your account. The course code is 206847.

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 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.

EXPECTED LEARNING OUTCOMES

The expected learning outcomes for the course, listed below, will be assessed through performance on guided classroom discussions, lab exercises, and embedded questions within the in-class exams.

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.

COURSE COMPONENTS & GRADING

HOMEWORK

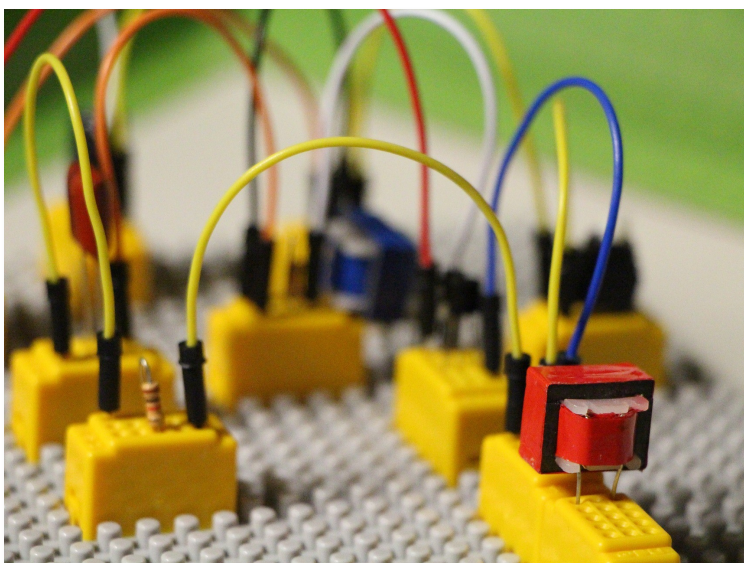
Homework, generally selected from the end of chapter problems in your text, will be assigned regularly and will not be collected. Even though the homework is not a part of your final grade, it is not in any way optional; it is

crucial for your understanding of the course material.

DISCUSSION AND LABORATORY

You will receive one grade for the lecture, discussion, and laboratory combined. They are not separate courses and they are not optional. The course grading policy on the last page of this syllabus describes how each will be weighted in your final grade.

Discussion will help you understand and practice problems related to homework and exams. Laboratory is an opportunity to learn the material



from a hands-on perspective. The laboratory section of this course has a separate syllabus which you will receive during your first laboratory session. Laboratory and discussion will be conducted during the assigned periods for those components of the course.

Attending your laboratory and discussion sections is the only way to get credit for those components of this course. *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.*

EXAMS

Two (2) in-class exams will be administered as scheduled. No makeup exams will be given, so please plan accordingly. All exams will be given in our normal classroom. Please see the course schedule on the next page of this syllabus for the scheduled dates.

EXAM RULES

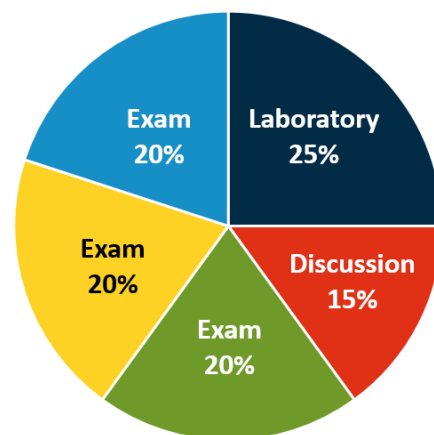
Scientific calculators only are permitted. All other electronics must be stowed out of sight during the exams. Cell phones are not considered to be calculators regardless of what apps may have been installed. If you are seen attempting to use a cell phone during the exam, you will be asked to leave and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

GRADING POLICY

The following scores will be accumulated during the course of the semester: Laboratory, Discussion, Exam 1, Exam 2, Final Exam, Final Exam. The course grade will be the weighted average of Laboratory at 25%, Discussion at 15%, and the three highest exam scores of the four listed above at 20% each.

Your letter grade will be determined on the following scale: F (≤ 49), D (50-59), C (60-74), B (75-89), A (90-100).

Grades which are within two points on either side of a grade boundary will receive the appropriate +/- qualifier. For example, grades of 73 or 74 earn a C+ while grades of 75 or 76 earn a B-.



CLASSROOM ETIQUETTE

Attending lecture is mandatory. You are considered both advised and responsible for anything discussed during lecture. 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 outside of approved exercises, 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 Student Disability Services (Access TECH).



STRATEGIES 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 just before an exam to begin. If you are stuck, use available department resources including your lecture instructor, TAs, and SI. Once you can work through a problem with your notes, book, study group, etc., be sure you can rework it entirely on your own.

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

IMPORTANT DATES

Week of	Chapter	Events	Laboratory
July 11	T	Tuesday, July 17 - First class day	
	W, R		<i>Electrostatic Forces & Coulomb's Law</i>
	F	Friday, July 15 - Last day to drop <i>without academic penalty</i>	
July 18	M, T	18-19	<i>Electric Fields</i>
	W, R	19-20	<i>Electric Circuits I</i>
	F	EXAM Friday, July 22 - Exam 1 (Ch. 17-19)	
July 25	M, T	20	<i>Electric Circuits II</i>
	W, R	21	<i>Magnetism I - Magnetic Fields</i>
	F	22	
August 1	M, T	22-23	<i>Magnetism III—Faraday's Law</i>
	W, R	23-24	<i>Geometrical Optics I - Reflection & Refraction</i>
	F	EXAM Friday, August 5 - Exam 2 (Ch. 20-23)	
August 8	M, T	24-25	<i>Geometrical Optics II - Lenses & Images</i>
	W, R	26	Wednesday, August 10 - Last class day
	F	EXAM Comprehensive Final Exam - Friday, August 12 - SCI 007, 11:00 am-1:30 pm	



UNIVERSITY POLICIES

ACADEMIC INTEGRITY

Students are expected to abide by the Student Code of Conduct at all times, especially in regards to academic integrity. Students violating the Code (or suspected of violating the Code) will be referred to the Office of Student Conduct. If the Office of Student Conduct finds that a student has violated the Code, then an academic penalty will be imposed in addition to any sanctions from the Office of Student Conduct. The penalty can range from a

lowered grade in the course to an F in the course. Students found responsible for cheating on exams will be given a grade of F in the course. Cheating includes, but is not limited to, copying someone else's work, looking on someone else's paper during an exam/quiz, sharing calculators or other materials during an exam/quiz, and using restricted material during an exam/quiz.

TTU OP 34.12 outlines grading policy as well as the definitions of scholastic dishonesty, all of which will be followed in all aspects of this course.

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. [...] "Scholastic dishonesty" includes, but [is] not limited to, cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts and any act designed to give unfair academic advantage to the student... or the attempt to commit such an act.

ACCOMODATIONS (ADA STATEMENT)

In compliance with the ADA, TTU OP 34.22, and TTU OP 10.08:

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 or call 806-742-2405.

RELIGIOUS HOLIDAYS

Pursuant to TTU OP 34.19:

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.