

COURSE SYLLABUS
PHYS 2401-001 & PHYS 2401-002
"Principles of Physics II"
Fall 2019

Instructor: Prof. Juyang Huang, Tel: 834-3182, E-mail: juyang.huang@ttu.edu
Lectures: Phys 2401-001: MWF 8:00 AM – 8:50 AM, Science 234.
Phys 2401-002: MWF 11:00 AM – 11:50 AM, Science 007.

Office Hours: MWF 9:30 AM – 10:30 AM, and by appointment, Science 35

Textbook: Chapters 22-37, "*Physics for Scientists and Engineers with Modern Physics*" by R.A. Serway and J. W. Jewett, 10th Edition, bundled with WebAssign access kit.

Course Description: This calculus-based introductory physics course covers the basic concepts of electricity, magnetism, and optics, thus providing background for study in science/engineering-related areas. This course partially fulfills the Natural Sciences core curriculum requirement.

Core Competency Statement: Students graduating from Texas Tech University should be able to explain some of the major concepts in the Natural Sciences and to demonstrate an understanding of scientific approaches to problem solving, including ethics.

Learning Outcomes: Students should be able to thoroughly understand the concepts and methods in electromagnetism and optics. Students are expected to be able to apply key physics principles to explain and solve calculus-based problems, both familiar and unfamiliar, in this area of physics.

Outcome assessment: The expected course outcomes will be assessed through online homework, lab exercises, and exams. The exams will provide a mixture of relatively familiar and unfamiliar problems, which will test the students' abilities to apply reasoning and math skills to their solutions.

Course website (<http://www.phys.ttu.edu/~huang24/Teaching/Phys2401>): It contains a lot of useful materials, such as my lecture notes, conceptual questions, and sample exams.

Conceptual Questions: Conceptual questions for each chapter will be posted on our class website. The answers usually can be found either in my lecture notes or in the textbook. You should work on these questions while you review the lectures, before doing your homework. About 15% of the points in each exam will be from these conceptual questions.

Homework: Online homework from the WebAssign website will be assigned and graded roughly weekly. You must register yourself using your purchased access code at <http://www.webassign.net>. Use both your legal name and your TTU ID (ex: R12345678) when setting up your account. Be sure to select the correct section:

Phys 2401 (Dr. Huang), section 001 - MWF 8 am class: The class key is **ttu 3258 0002**
Phys 2401 (Dr. Huang), section 002- MWF 11 am class: The class key is **ttu 5794 8779**

Homework will be made available before the material is covered in lecture and will be due on the posted date before the exam covering that material. In general, an extension request of homework will not be granted one week after the due day. Pay attention to the instructions on the homework website about how the homework questions are scored. Even though the homework is weighted lightly in your course grade, it is not in any way optional; it is crucial for your understanding of the course material.

Variations of some of the assigned problems will be selected for the examinations and final. Doing homework is important for you to practice the problem solving skills in physics and to check whether or not you really understand the important concepts. Doing homework on your own is the most effective way to improve your course grade.

Labs: Labs are required for this course. They will help you to develop functional understanding of the concepts and principles discussed in the lectures. *If you fail the lab portion of this class, you will fail this course.*

Attendance: You are expected to attend ALL lectures unless you have an emergency. You may have opportunities to earn some extra credits during the lectures.

Exams: There will be 3 in-class exams, and a comprehensive final (see Class Calendar). The exams cover fundamental concepts and quantitative problems, related to the homework and lectures. The exams are closed book. You should bring a calculator, orange scantron sheets, a #2 pencil, an eraser, your **TTU student ID**, and an optional single 3x5 equation card. *No make-up examinations will be given. In the case of a serious emergency, please see the instructor to discuss how the final grade will be determined.*

Grading:	Lab	20%
	Homework	15%
	<u>3 Exams + Final x 2 (drop the lowest one)</u>	<u>65%</u>
	Total:	100%

Grade Scale: 100-A-89-B-76-C-63-D-50-F-0.

VERY IMPORTANT: Experience shows that you should **work about 10 hours on this course outside of class every week in studying your notes and doing the homework**. Failure to do so will almost surely result in a grade of D or F. This is the most important recommendation we make to you. Take notes in class, pay attention, and participate by asking and answering questions. Take a look at the new chapters before they are covered. See your instructor during his office hours for questions.

Disability: 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 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.

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.

TTU Resources for Discrimination, Harassment, and Sexual Violence: Texas Tech University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from gender and/or sex discrimination of any kind. Sexual assault, discrimination, harassment, and other Title IX violations are not tolerated by the University. Report any incidents to the Office of Student Rights & Resolution, (806) 742-7233 or file a report online at titleix.ttu.edu/students. Faculty and staff members at TTU are committed to connecting you to resources on campus. Some of these available resources are: **TTU Student Counseling Center** 806 742-3674, <https://www.depts.ttu.edu/scc/> (Provides confidential support on campus.) **TTU Student Counseling Center 24-hour Helpline** 806 742-5555, (Assists students who are experiencing a mental health or interpersonal violence crisis. If you call the helpline, you will speak with a mental health counselor.) **Voice of Hope Lubbock Rape Crisis Center**, 806 742-7273, voiceofhopelubbock.org (24-hour hotline that provides support for survivors of sexual violence.) **The Risk, Intervention, Safety and Education (RISE) Office**, 806 742-2110, rise.ttu.edu (Provides a range of resources and support options focused on prevention, education, and student wellness.) **Texas Tech Police Department**, 806 742-3931, <http://www.depts.ttu.edu/ttpd/> (To report criminal activity that occurs on or near Texas Tech campus.) **LGBTQIA** Within the Center for Campus Life, the Office of LGBTQIA serves the Texas Tech community through facilitation and leadership of programming and advocacy efforts. This work is aimed at strengthening the lesbian, gay, bisexual, transgender, queer, intersex, and asexual (LGBTQIA) community and sustaining an inclusive campus that welcomes people of all sexual orientations, gender identities, and gender expressions.

Disclaimer: The information contained in this course syllabus is correct at the time of issue. However, the class instructor reserves the right to amend any dates, topics, assignments or other planned features of the course. Any changes will be announced in class and absent students are responsible for keeping up-to-date with any changes and developments that may occur. The class instructor will not be responsible for any adverse consequences arising from the use of this information or students' failure to be aware of any subsequent amendments.