

**COURSE SYLLABUS, Physics 2401-H01, Principles of Physics II, HONORS, Spring, 2013**

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**Office Hours:** Just after class, 2:30-4 pm MWF, & *by appointment*. An email distribution list will be developed & we can have email discussions. I make email *announcements!* Please check your email **DAILY!**

**Course Meets:** 9:00 - 9:50am, MWF in Science Room 112. **NOTE:** The weekend *doesn't start Thursday evening or end Monday evening! Friday & Monday are class days!!*

**Class Web Page:** <http://www.phys.ttu.edu/~cmyles/Phys2401/2401.html>. *Parts of it are under construction!*

There, you'll find: **a.** Syllabus. **b.** Lab Syllabus. **c.** **Important Announcements**. **d.** Power Point Lectures (under construction!!). **e.** Link to the **WebAssign** on-line homework. **f.** Help Resources & Links. **g.** Other items about this class. *Please check this page often.*

**Textbook:** *Physics for Scientists and Engineers with Modern Physics*. **The 8<sup>th</sup> edition is REQUIRED!!** by R.A. Serway & J.W. Jewett with access to *WebAssign* (ISBN for bundle 9781285143811).

**Co-Requisites:** You **must also be enrolled** in separate 2401 (no-credit) **Laboratory** & 2401 (no credit) **Recitation** Sections! The **Lab & Recitation Syllabi** have more details.

**Note!** The *Laboratory Manual for Physics 2401*, (Principles of Physics II) is also required!

**Course Topics:** Topics (selected), from Chs 23-38 of text. Detailed coverage will be announced as we go.

**Course Goals:** This course is a survey of **2<sup>nd</sup> Semester Calculus-Based Physics** (Electricity, Magnetism, Electromagnetic Waves, Light, Optics). Its purpose intended to acquaint students with the basic laws of physics, to develop a better understanding of physical science in general, & to help prepare you for upper-division science & engineering classes. To this end, it will emphasize a mix of laboratory, conceptual understanding & standard end-of-chapter homework solving skills.

**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.

**Methods for Assessing Expected Learning Outcomes:** Learning outcomes for the course will be assessed through performance on the homework sets, labs, recitations, exams, & the final exam.

**Laboratory and Recitation:** Lab & Recitation sessions will be conducted by TA's during assigned lab & recitation periods. See the **Lab & Recitation Syllabi** for more information.

**Online Homework:** End of chapter problems from the **WebAssign** website will be assigned & graded approximately weekly. More discussion & details about this is below & also on a separate sheet.

**THE WebAssign CLASS KEY IS ttu 1591 6721.**

**Grades/Grading Policy:** The following scores will be accumulated during the semester, & given the amount of credit towards your final grade that is shown below:

**Homework** (+ quizzes, see below) = **10%**; **Lab** = **10%**; **Recitation** = **5%**

**Exam I; Exam II; Exam III; Final Exam; Final Exam**

**Each of the 5 Exam Grades = 18.75% of the total credit.**

**The lowest Exam Score will be dropped.**

(Exam I, or II or III, or one of the Final Exam Scores count).

Because one **Exam Score** is dropped, **No makeup Exams will be given!!**

**Exceptions:** Medical problems with a Drs. excuse, absences on TTU business, true personal or family emergencies (decided case-by-case).

**Course Letter Grades** will be determined on the following approximate scale:  
**100 ≥ A ≥ 90 > B ≥ 78 > C ≥ 65 > D ≥ 55 > F ≥ 0**

**STUDENT RESPONSIBILITIES:** *Attend as many classes as possible, come to class prepared, do the homework, read the material BEFORE I lecture over it, & keep up as we go along!*

**Course Level & Math Level:** The course is at the standard (nationwide) Calculus-based Physics II level.

**Math Co-Requisite:** You **MUST be enrolled in** (or have taken) **Calculus II** (Math 1352), or **Higher Math for Scientists/Engineers I/II** (Math 3350/3351), or **Differential Equations I/II** (Math 3354/4354), or equivalent.

**Math Pre-Requisites:** **Calculus I** (Math 1351), **Trig/Algebra** (Math 1320/1321), or **Pre-Calculus** (Math 1550), or equivalent. This **ISN'T** a math course! ***It isn't my job to teach you math!! There is no time to do so!!*** I must assume that you know it! Many problems students have with this course are the fast pace & the math.

**Physics Pre-Requisite:** **Principles of Physics I** (Physics 1408), or an equivalent Calculus-based Physics I course elsewhere. This **ISN'T** a Physics I course! ***It isn't my job to teach you Physics I!! There is no time to do so!!*** I must assume that you know it! Some problems that students have with this course are that they really don't know Physics I material very well.

### **TENTATIVE (!!!) Topic Coverage and Exam Schedule**

**Exam I:** Chapters 23-25; Week of February 4-8?

**Exam II:** Chapters 26-29; Week of March 4-8?

**Exam III:** Chapters 30-34; Week of April 15-19?

**FINAL EXAM Chapters 23-38 (Comprehensive!)**

**Friday, May 10, 7:30 am – 10:00 am.**

The location of the **Final Exam** will be announced later.

**Homework:** On-line homework problems will be assigned & graded through the commercial website **WebAssign**. Working problems is the most effective way means to learn physics, which is ***impossible*** otherwise! Once you are registered at that website, you will be able to see the assignments. **I will ATTEMPT** to post new assignments each Monday. They will be due by 11:30 pm on the Tues. a week later. You will be able to retrieve the answers after the due date. There will be several homework sets for this course.

**Pay close attention to the instructions on WebAssign about how the homework is scored.**

You may be able to find problem solutions on the internet or elsewhere. If so, try to solve a problem first, without looking at the solutions. Copying solutions ***will not*** help you learn physics!

**Instructions on how to access WebAssign are on a separate sheet.**

Note that this site isn't at TTU, so you should give yourself plenty of time for submitting answers before the deadlines; sometimes the network can be slow or down.

**Quizzes:** To encourage attendance & try to prevent the large attendance decreases seen in previous semesters, especially on Fridays, a short (~5 - 7 min.) **Quiz** will be given **EACH FRIDAY**, with mostly qualitative questions on Physical Concepts & simple problems similar to those assigned. ***The quiz percentage will be averaged with the homework grade & will be equal in weight to one homework set.*** Because the Quiz grade is worth only a small percentage of the course grade,

**NO MAKE-UP QUIZZES will be given for any reason!!!**

You are ***strongly encouraged*** to form study groups to study for quizzes (& Exams) together!

**This is how professionals work in "real life"!**

**Laboratory and Recitation Grades:** The **Laboratory and Recitation Parts** of your Grade are determined by TAs. It is given to me at semester's end.

**NOTE!! The Laboratory and Recitation Grades WILL NOT be dropped!**

**Attendance:** I don't take roll & I have no specific attendance policy. But, isn't it obvious that (unless you're a genius!) class attendance is required to get a good grade? The reason for Fri. **Quizzes** is to encourage attendance. **Skipping also costs money!** With TTU tuition & fee rates for full-time (Texas) students each` lecture costs about \$28.56 & you are "throwing away" \$28.56 each time you skip! After a while, this adds up!

### **IMPORTANT DATES**

**Mon., Jan. 21:** MLK Day, TTU Holiday, **NO CLASS!**      **Tues., Jan. 22:** Last day to add.  
**Fri., Feb. 1:** Last drop date with refund.      **Wed., Feb. 13:** Last withdraw date with refund.  
**Sat., March 9-Sun., March 17:** Spring Break, **NO CLASS!**      **Wed., March 20:** Mid-Semester.

**Mon., March 18 – Fri., March 22:**

I'm out of town at an APS Meeting in Baltimore. I'll get a substitute.

**Wed., March 27:** Last Day to drop.      **Mon., April 1:** "Easter Monday" **NO CLASS.**

**Thurs., April 4- Sat., April 6:**

I'm out at a Texas Section APS Meeting, Tarleton State U., Stephenville, TX.

**Tues., May 7:** Last TTU class day.      **Thurs., May 9 – Tues., May 14:** Final Exam Period.

**Friday, May 10, 7:30 am – 10:00 am:** **FINAL EXAM** Chapters 23-38 (Comprehensive!)

**Mon., May 20:** Grades are due!

**Hints:** *Many people find this course difficult & very fast paced! Much dedication & hard work is necessary to get a good grade (or to **learn something!**) You're likely not taking it out of an interest in physics but because it's required. If you have average intelligence & good math skills, I strongly suggest that you spend at least 2 - 3 hours outside class for every hour in class (~ 6 hours/week!) Failure to do so may result in a poor grade!*

#### **Suggested Strategies for Success**

1. Be prepared! Study your notes & available on-line lectures, read the material before we cover it in class, take advantage of online resources. This will help you keep up, will make for more productive classroom interaction, & will help keep you prepared for the exams that will make up most of your semester grade.
2. Begin homework assignments as soon as possible. Don't wait until the night before it is due to begin.
3. Don't "blow off" the first (or any!) exam just because there is a dropped score. The purpose of the dropped score is in case of illness or other extenuating circumstances.
4. Use pencil & paper first to do homework problems before putting solutions online. Keep your solutions for reviewing before exams. The on-line homework cannot be viewed after it is due. Once you can work a problem with your notes, book, study group, etc., be sure you can rework it entirely on your own.
5. If you are stuck, use available department resources including course the instructor, TAs, & SI sessions.

#### **Where to Go for Help????????????!!!!**

1. **See Me!!!** Room 18. During office hours or not (I'm usually not rigid about these). Or call me on the phone. Or email me! I respond to email!!!
2. **See your Physics 2401 Lab TA!!!** There will be office hours for this person.
3. **Get a tutor!!!** The Physics Department Office (Room 101) has an approved list.
4. **Your Fellow Students!!!** It is often a *very* effective strategy to study physics *together in a group*. I strongly recommend this! If you don't have friends in class, why not make some?
5. **Help Sessions!!!** I may arrange a weekly Help/Problem Solving session. Time & place TBA!
6. **The Internet!!!** There are *HUGE* numbers of Physics Help Web sites! Using Google.com & typing in "Physics Help" gives about 66,700,000 hits!!!! I encourage you to try out some of these.

**BOTTOM LINE:** Numerous help resources are available. *Please take advantage of them!*

## ACADEMIC INTEGRITY

Academic dishonesty will not be tolerated. Students caught in this type of behavior will be punished to the fullest extent allowed by TTU. See TTU Student Handbook or Undergrad Catalogue.

## CLASSROOM CIVILITY AND ETIQUETTE

Students are expected to assist in maintaining an environment which is conducive to learning. To assure that everyone has an opportunity to gain from class time, you are expected to adhere to the following

### Simple Rules of Classroom Etiquette

1. In the classroom, students are prohibited from using cell phones (either  *talking OR texting!*), eating/drinking, making offensive remarks, reading newspapers or other unrelated material, visiting with your neighbor, sleeping or engaging in other forms of distraction. Inappropriate behavior of this kind shall result in, minimally, *a request to leave class*.
2. **IT IS EXTREMELY RUDE, TO BOTH THE INSTRUCTOR AND TO OTHER STUDENTS, TO LEAVE DURING A LECTURE OR TO ARRIVE VERY LATE.** Since attendance of lectures is optional, please do not come to class if you are unable to attend for the full duration or if you are not able to *arrive on time!* Physical illness is an obvious exception to this rule. Since class begins at 9:00am, “oversleeping” is never an excuse for lateness. If you have an expected reason to leave early, please tell the instructor at the beginning of class and sit in a convenient location for leaving without disturbing the class.

## DISABILITY STATEMENT

*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.*