COURSE SYLLABUS -- Physics 2401-H01, Principles of Physics II, Honors, Fall, 2010

Instructor: Dr. Charles W. Myles, Professor of Physics. Office: Science Room 18. Phone: 742-3768.
Office Hours: Just after class, 2:30-4pm MWF, & by appointment. Web page: http://www.phys.ttu.edu/~cmyles/
Email: Charley.Myles@ttu.edu. An email distribution list will be developed & we'll have email discussions. I make important announcements by email! It's vital that I have your correct email address, that you tell me if it changes, & that you check your email DAILY!

Course Meets: 11:00–11:50am, Mon., Wed., and Fri., Sc. Rm 112. NOTE: The weekend doesn’t start Thurs. evening or end Mon. evening! Fri. & Mon. are class days & NOT weekend days.

Class Web Page: http://www.phys.ttu.edu/~cmyles/Phys2401/2401.html. Many parts are under construction!
There, you’ll find: a. Syllabus. b. Lab Syllabus. c. Help Resources. d. Power Point Lectures (under construction). e. Important Announcements. f. Link to Mastering Physics online homework. g. Potentially helpful links. h. Other items about this class. Please check this page often.

Class Facebook Group: http://www.facebook.com/?ref=home#!/group.php?gid=132268283484597. In an attempt to be in the 21st Century, I’ve started a course Facebook Group: Texas Tech Physics 2401 (Honors), Fall, 2010. I’ll try to post relevant announcements & topics of interest to the class on the Wall. I encourage you to join. If you do, you’ll be able to post course-related questions & comments, so that others in the class can see them & comment. This may start discussions about the course between some of you & between you & me. This Group is private & restricted to students enrolled in TTU Physics 2401 (Honors), Fall, 2010 ONLY! You have to ask me (Administrator) to join before you can post. I’ll check that you are registered in the course before I let you join. Please bear in mind that I’m fairly new to Facebook & am just learning about it, so I might not do everything concerning this in the most efficient manner.

Co-Requisite: You must also be enrolled in 2401 (no-credit) Laboratory/Recitation! Lab Syllabus has details.


Course Topics: Topics (selected), from Chapters 21-35 of the text. Note that scheduling begins with Chapters 32-35, then Chapters 21-31. Detailed coverage will be announced as we go.

Grades/Grading Policy: The following scores will be accumulated during the semester:
Exam I; Exam II; Exam III; Final Exam; Final Exam; Lab/Recitation, Homework (+ Quizzes, see below)

The course grade will be determined by the following scheme:
4 Highest of 5 Exams (20% each) = 80%, Lab/Recitation = 10%, Homework = 10%, Total = 100%.
One Exam Score is dropped, so 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).

Letter Grades will be determined on the following approximate scale:

<table>
<thead>
<tr>
<th>Score</th>
<th>Grade</th>
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<tbody>
<tr>
<td>100</td>
<td>A</td>
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<tr>
<td>≥ 90</td>
<td>B</td>
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<tr>
<td>≥ 80</td>
<td>C</td>
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<tr>
<td>≥ 65</td>
<td>D</td>
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<tr>
<td>≥ 55</td>
<td>F</td>
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Course Goals: This course is a survey of 2nd semester Physics (Light, Optics, Electricity, Magnetism, Electromagnetic Waves).
It’s purpose is to acquaint you with the basic laws of physics, to develop a better understanding of physical science in general, & to help prepare you for other upper-division physics & engineering classes. To this end, it will emphasize a mix of laboratory, conceptual understanding & end-of-chapter problem solving skills.

Expected Learning Outcomes: Upon successful completion of this course, students will be able to:
1. Understand and be able to apply Gauss's law for electric and magnetic fields.
2. Be able to use the laws of reflection and refraction to understand simple optics.
3. Understand and be able to manipulate the fundamental elements of basic circuits.

Methods for Assessing Expected Learning Outcomes: The expected learning outcomes for the course will be assessed through certain problems on the homework, certain problems on the in-class exams, and certain problems on the final exam.

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 level. 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. 

**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! Most problems students have with this course are the fast pace & the math! 

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**TENTATIVE (!!!) Exam Schedule**

<table>
<thead>
<tr>
<th>Exam</th>
<th>Chapters</th>
<th>Date</th>
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<tbody>
<tr>
<td>Exam I</td>
<td>32-35</td>
<td>Week of Monday, Sept. 20</td>
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<tr>
<td>Exam II</td>
<td>21-25</td>
<td>Week of Monday, Oct. 18</td>
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<tr>
<td>Exam III</td>
<td>26-29</td>
<td>Week of Monday, Nov. 22</td>
</tr>
<tr>
<td><strong>FINAL EXAM</strong></td>
<td>21-35 (Comprehensive!)</td>
<td><strong>1:30-4pm, Wed., December 15!!</strong></td>
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**Homework:** On-line homework problems will be assigned for each chapter with deadlines shortly after we finish a chapter. Problems will be worked & graded on-line through the **Mastering Physics** website. Working problems is the most effective way means to learn physics, which is **impossible** otherwise! After you register on Mastering Physics, you'll be able to see assignments. You'll be able to get answers after due dates.

Pay attention to instructions on Mastering Physics about how homework is graded. 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 **Mastering Physics** 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.

**NOTE!! The Homework grade WILL NOT be dropped!**

**Quizzes:** To encourage attendance & try to prevent the large attendance decreases seen in previous semesters, especially Fridays, a short (~10 min.) **Quiz will be given EACH FRIDAY**, with questions on Physical Concepts & simple problems similar to those assigned. The **quiz percent will be averaged with the homework grade & will be equal in weight to one homework set.** You are **strongly encouraged** to form study groups to study for quizzes (& Exams) together! **This is how professionals work in “real life”!**

**Laboratory/Recitation Grade:** The **Laboratory/Recitation Part of your Grade** is determined by your TA. It is given to me at semester’s end. **NOTE!! The Laboratory/Recitation grade 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 Friday Quizzes is to encourage attendance. **Skipping also costs you money!** With TTU tuition & fee rates for full-time (Texas) students **each lecture costs $18.71** & you are “throwing away” **$18.71** each time you skip! After a while, this adds up!

**IMPORTANT DATES**

| Tues., Aug. 31: | Mon., Sept. 6: Labor Day, **NO CLASS!** |
| Mon., Sept. 13: | Mon., Sept. 6: Labor Day, **NO CLASS!** |
| Thurs., Sept. 23: | Week of Sept. 20: EXAM I (Chs. 32-35!) |
| Mon., Nov. 1: | Week of Oct. 18: EXAM II (Chs. 21-25!) |
| Wed., Dec. 8: | Week of Nov. 22: EXAM III (Chs. 26-29!) |
| Mon., Dec. 20: | Wed., Dec. 15: Final Exam! (1:30-4pm!) |

**Mon., Oct. 11-Tues., Oct. 12:** “Fall Break”, **NO CLASS!**

**Wed., Nov. 24-Sun., Nov. 28:** Thanksgiving, **NO CLASS!**

**Thurs., Oct. 21-Sat., Oct. 23:** **I will be out of town!**

I may be out of town a few other times. I’ll arrange a substitute for **Fri., Oct. 22** & for any other times I am gone.

**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 (about 6 hours per week!!)! Failure to do so may result in a poor grade!
Everyone has different learning styles. 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.

1. Begin homework assignments as soon as possible. Don’t wait until the night before it is due to begin.
2. 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.
3. 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.
4. 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 11:00am, “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.
3. No laptops or any other electronic devices are allowed to be operational in class unless the need for such device for reason of a disability is documented by Access TECH.

**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.