

COURSE SYLLABUS -- Physics 1408-001, *Principles of Physics I*, Summer II, 2008

Instructor: Dr. Charles W. Myles, Professor of Physics. **Office:** Science Room 18. **Phone:** 742-3768.

Office Hours: Just after class, 3-4pm MWF, & *by appointment*. **Web page:** <http://www.phys.ttu.edu/~cmyles/>

Email: Charley.Myles@ttu.edu. An email distribution list will be developed & we can 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: Noon – 1:50pm, Mon., Tues., Wed., Thurs., **and** Fri., Sc. Rm 010. **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/Phys1408/1408.html>. **Under construction!** There, you'll find: In Word format: a. This Syllabus. b. A Lab Syllabus. c. Help Resources. d. Fall'07 Phys. 1408 Exams/Quizzes (.jpg solutions). e. Phys. 1403 Exams/Quizzes (.jpg solutions) from several years. Also, f. Lectures in Power Point format. g. **Important Announcements**. h. Link to **Mastering Physics** on-line homework. i. Other helpful links. j. Other important items about this class. **Please get into the habit of checking this page often!**

TTU students can get Power Point, Word, & other software *free or almost free!* See <http://www.phys.ttu.edu/~cmyles/Phys1306/PPT.txt>.

Laboratory Co-Requisite: You **must be enrolled concurrently** in a section of 1408 (no-credit) Lab!

Textbook: Douglas C. Giancoli, *Physics for Scientists and Engineers*, (Pearson, 2008). I use the 4th Ed. The 3rd Ed might be ok. But, examples & problem numbers may have changed from the 3rd to the 4th Ed!

Course Topics: Topics (selected), Chs. 1-16 of text. Detailed coverage announced as we go.

Course Objectives: Survey of **1st semester Physics** (mechanics, fluids, waves). **In this course, you'll learn:**

1. How to use Newton's laws to solve problems with static & dynamic bodies.
2. How to use conservation of energy & linear & angular momentum to solve problems.
3. How to represent wave motion & to solve problems about sound propagation.

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 & Assumed Math Level: **Level:** Standard (nationwide) introductory physics level.

Math Co-Requisite: You **MUST be enrolled concurrently in** (or have already taken) **Calculus I** (TTU Math 1351, or equivalent)! A thorough knowledge of Algebra & Trig (or Pre-Calculus) is assumed! This **ISNT** a math course! *It's is not my job to teach you math & there is no time for this!!* I must assume that you know it! Major problems students have with this course are the fast pace & the math.

Grades, Exams & TENTATIVE (!!!) Exam Schedule. The **Lecture Part of your Grade** is based on:

Exam I	20% of grade	Chapters 1-4 (??)	Wed., July 16
Exam II	20% of grade	Chapters 5-8 (??)	Wed., July 23
Exam III	20% of grade	Chapters 9-13 (??)	Wed., July 30
Final Exam	40% of grade	Comprehensive (incl. Chs. 14-16??)	8:00-10:30am, Thurs., Aug. 7!!!
Homework	20% of grade	On-line! (See discussion below!)	

Friday Quizzes. Part of homework grade. Equal weight to one problem set. (See discussion below!)

Make-up Exams & Drop Policy: **NO MAKE-UP EXAMS WILL BE GIVEN!!** Exceptions: Medical problems with Dr.'s excuse, absences on TTU business, & true personal/family emergencies (decided case-by-case). The lowest exam grade (**excluding the Final!**) will be dropped. The Homework grade will **NOT** be dropped!

Homework: On-line homework problem sets 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. Doing problems is the most effective means of learning physics, which is **impossible** without working problems! Once you are registered at **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 scored.** You may be able to find solutions to homework 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.

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 FRI.**, 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. Quizzes/Solutions from Fall'07 are on the **Phys. 1408 Quiz Page:**

<http://www.phys.ttu.edu/%7Ecmyles/Phys1408/quizzes.html>. It was a different book, but the material was the same as in our book & the style/content of those is typical of my Quizzes. Examples of my Quiz style/content can also be found on my **Phys. 1403 Quiz Page**: <http://www.phys.ttu.edu/%7Ecmyles/Phys1306/quizzes.html>, where many Quizzes/Solutions are posted. (1403 is like 1408, but with no calculus). Note that I've used on-line Homework only recently. Before this, my Quizzes were longer. My current Quiz style/content are between my Phys. 1403 Phys. Quizzes, & my **Phys. 1403 Reading Quizzes**: <http://www.phys.ttu.edu/%7Ecmyles/Phys1306/rquizzes.html>. You're **strongly encouraged** to form study groups to study for quizzes together! **This is how professionals work in real life!** Try to solve old Quizzes **BEFORE** looking at the solutions. You **CAN'T LEARN PHYSICS** by copying solutions!

Attendance: I don't take roll & 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 you money! TTU tuition & fees for full-time (Texas) students total about \$226.10 per credit hour. So, for the lecture portion (3 hours) of the course, you've paid about \$678.31. We have 22 classes, so each meeting costs about \$30.83 & you are "throwing away" this amount each time you skip! After a while, this adds up!

Lab Grade: The **Lab Part of your Grade** is determined by your TA & is given to me at the end of the session.

Course Grade: The **Course Grade** is obtained from the **Lecture Grade** (80%) & **Lab Grade** (20%).

APPROXIMATE (!!!!!) Grade Scale: $100 \geq A \geq 90 \geq B \geq 78 \geq C \geq 66 \geq D \geq 54 \geq F \geq 0$

NOTE: I reserve the right to slightly alter these cutoffs! I reserve the right to assign a higher grade to any student whose efforts may not be reflected in their total points. This decision is mine alone to make. You can't receive a lower grade than indicated by the total points.

Hints: Many students find this course difficult & very fast paced! Much dedication 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 & a good high school math background, I strongly suggest that you spend 2 - 3 hours outside class for every hour in class (in summer, about 20 hrs/wk!!) Failure to do so may result in a poor grade!

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 1408 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'll try to arrange a weekly Help/Problem Solving session. Time & place will be announced!
6. **The Internet!!!** There are **HUGE** numbers of Physics Help Web sites! Using Google.com & typing in "Physics Help" gives about 15,400,000 hits!!!! I encourage you to try out some of these The last page has a list of some Physics Help Web pages.

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

IMPORTANT DATES: **Fri., July 11:** Last drop date-full refund. **Mon., July 28:** Last drop date. **Mon., Aug. 4:** Last day to withdraw from TTU. **Wed., Aug. 6:** Last class. **Thurs., Aug. 7:** **FINAL EXAM!!** 8-10:30am. **Mon. Aug. 11:** Grades due!

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: Students are expected to assist in maintaining an environment which is conducive to learning. To assure that all students have an opportunity to gain from class time, students are prohibited from using cell phones, eating/drinking in class, making offensive remarks, reading newspapers, sleeping or engaging in other forms of distraction. Inappropriate behavior shall result in, minimally, a request to leave class.

Any student who, because of disabling conditions, may require some special arrangements in order to meet the course requirements should contact the instructor as soon as possible so that necessary accommodations can be made. Proper documentation must be presented from the Dean of Students Office!

SOME PHYSICS HELP RESOURCES ON THE WORLD WIDE WEB

The following list is **FAR FROM** exhaustive! Search the Web yourself & see what you find!

1. The Math and Physics Help Homepage:
<http://www2.ncsu.edu/unity/lockers/users/f/felder/public/kenny/home.html>
2. Help for Physics Students: http://www.dctech.com/physics/student_help.html
3. Physics Help and Math Help: <http://mytutor.topcities.com/>
4. Physics Help: <http://www.fortunecity.com/greenfield/eagles/180/>
5. Multimedia Physics Studios: <http://www.glenbrook.k12.il.us/gbssci/phys/mmedia/>
(Contains animated physics illustrations!!)
6. Physics Help of All Kinds: <http://www.trentu.ca/academic/physics/help/help.html>
7. Physicstutes: <http://www.launc.tased.edu.au/online/sciences/physics/tutes1.html>
8. The Physics Classroom: <http://www.physicsclassroom.com/>
9. The Physics Help Room: <http://helproom.physics.lsa.umich.edu/>