COURSE SYLLABUS -- Physics 1403, General Physics I, Summer Session II, 2016

Instructor: Dr. Charles W. Myles, Professor of Physics. Office: Science Room 18. Phone: 834-4563.
Office Hours: Right after class plus 2:30-3:30 pm, M-F, and by appointment.

Email: Charley.Myles@ttu.edu. A class email distribution list will be developed & we can have email discussions. I make important class announcements by email! It is vital that I have your correct email address, that you check your email DAILY & that you tell me if you change your email address! Do you want to know more about me? If so, I suggest that you look at my page:

http://www.phys.ttu.edu/~cmyles/

Class Meets: 10:00-11:50 am, Monday, Tuesday, Wednesday, Thursday, and Friday, Science Room 010.

EDITORIAL: The lecture part of the course counts 3 of the 4 credit hours. It meets 5 days/week for 110 minutes! That's 550 minutes (9.2 hours!!) per week! This is an intense, educationally unsound method of teaching & learning! I don’t like it & you may not either! But, we’re stuck with it & you chose to take Physics this way. We move through the material so rapidly that if you miss 2 class days (220 minutes = 3.7 hours!), that’s equivalent to missing more than a week of class in the regular semester! So attendance is important! Please try to come consistently to class!

The weekend doesn’t start Thursday night! Friday is a class day, not a weekend day!

Class Website: http://www.phys.ttu.edu/%7Ecmyles/Physics1403/1403.html.

Parts of this are under construction! There, you'll find: a. This Syllabus. b. A Lab/Recitation Syllabus.

c. Help Resources. d. Some
Course Objectives: This is a survey of 1st semester Physics (mechanics, fluids, waves). It is intended to acquaint students with the basic laws of physics & to develop an understanding of physical science in general. It will emphasize a mix of lab, conceptual understanding and standard end-of-chapter homework solving skills.

In this course, you will learn:

1. How to use Newton’s laws to solve dynamics & statics problems.
2. How to use conservation of energy, momentum, & angular momentum to solve problems.
3. How to treat mechanical waves.

Core Curriculum Statements Required by TTU

Core Purpose Statement: Students graduating from TTU should be able to demonstrate problem solving skills & critical thinking skills, such as the development & use of models that are consistent with experiment. This is consistent with the objectives for the Natural Science Core Curriculum Objectives listed below & will be demonstrated by the Expected Learning Outcomes listed below.

Core Curriculum Objective: The objective of studying natural sciences in a core curriculum is to enable students to understand, construct, & evaluate relationships in the natural sciences, & to enable them to understand the foundation for building & testing theories. Natural sciences investigate the phenomena of the physical world.

Expected Learning Outcomes: After this course, students should be able to demonstrate problem solving & critical thinking skills, such as development & use of models that are consistent with experiment. They should:

1. Be able to demonstrate their understanding by the ability to solve problems & answer questions related to the concepts being studied. They should be able to explain concepts clearly in English to another person.
2. Understand how mathematical models are developed based on experimental evidence. They should be able to demonstrate the ability to take & analyze data. They should be able to develop a model based on the data, using graphing & other techniques, which can be used to predict the outcome of other experiments. They should understand the limitations of models & be able to use them to make predictions.

Methods for Assessing Expected Learning Outcomes: Learning outcomes will be assessed through quizzes, homework & exams that require students to show their calculations & explain their reasoning.
**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:** This is algebra/trig based 1st semester physics. Math **pre-requisites:** Math 1320 (Algebra) & Math 1321 (Trig) or Math 1550 (Pre-Calculus) or equivalent. This isn’t a math course. I won’t have time to teach you math! **I must assume that you know it!** The course level is the standard, nation-wide introductory physics level. The major problems students have with it are its fast pace & the math.

**Grades:** The following scores will be accumulated during the session & will be given the amount of credit towards your final grade that is shown here: 1. **Lab/Recitation** = 15%. 2. **Homework** = 10% (includes quizzes, see below). Homework is on-line, see below! 3. **Friday Quizzes:** Part of Homework grade. Equal weight to 1 problem set. See below! 4. **EXAMS:** Exam I, Exam II, Exam III, Final Exam, Final Exam: Each = 18.75% of total credit. The lowest Exam Score will be dropped. (Exam I, or II or III, or one of the Final Exam Scores count). **NO this does NOT mean that there will be 2 Final Exams!** It means that the Final Exam counts twice the weight as the other exams unless the Final is the lowest score. Because an Exam Score is dropped, **NO MAKEUP EXAMS WILL BE GIVEN!** **Exceptions:** Medical problems with Drs. excuse, absences on TTU business, true personal or family emergencies (decided case-by-case).

**Tentative (!!!) Exam Schedule.**

<table>
<thead>
<tr>
<th>Exam</th>
<th>Chapters</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Exam I</td>
<td>1-3 (?)</td>
<td>Wednesday, July 20</td>
</tr>
<tr>
<td>Exam II</td>
<td>4-7 (?)</td>
<td>Wednesday, July 27</td>
</tr>
<tr>
<td>Exam III</td>
<td>8-10 (?)</td>
<td>Wednesday, August 3</td>
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**Final Exam** Comprehensive (including Chs. 11-13) **Friday, August 12, 11:00 am - 1:30 pm!**

**Online Homework**

Problems from the WebAssign commercial website will be assigned & graded for each chapter. More discussion & details about this are below & also on a separate sheet.

**THE WebAssign CLASS KEY IS ttu 3821 9159**

Working problems is the most effective way means to learn physics, which is **impossible** otherwise! Once you are registered at WebAssign, you will be able to see the assignments. **I’LL ATTEMPT** to post new assignments each time we begin a new chapter. They’ll be due by 11:30 pm about 5 days later. You will be able to retrieve the answers after the due date.

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

You may be able to find solutions on the internet. If so, try to solve a problem first, without looking at solutions. Copying solutions **will not** help you learn physics! **Learning physics isn’t the same as becoming proficient at Google searches!** Thousands of people were able to learn physics hundreds of years before the internet existed!

**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. The **Homework grade will NOT be dropped!**

**Quizzes:** To encourage attendance & try to prevent the large attendance decreases often seen as the session progresses, a short (~10-15 min.) Quiz will be given EACH FRIDAY, with conceptual questions & 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.** Some old Quizzes & Solutions are on the Phys. 1403 Quiz Page: [http://www.phys.ttu.edu/%7Ecmyles/Phys1306/quizses.html](http://www.phys.ttu.edu/%7Ecmyles/Phys1306/quizses.html). Try solving the Quizzes **BEFORE** looking at solutions. You **CAN’T LEARN PHYSICS** by copying solutions! **NOTE!! There will be NO make-up quizzes for any reason!!!** It makes no logical sense to give make-ups on something that is designed to make you come on Fridays!

**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 Quizzes are to encourage attendance. **Skipping also costs you money!** TTU tuition & fees for full-time (Texas) students total for the lecture portion of this course costs about **$51!** Each time you skip, you’re “throwing away” **$51! After a while, this adds up!**

**THE LABORATORY/RECITATION GRADE**

This is calculated by your TA & is given to me at the session’s end.

**APPROXIMATE (!!!)** Course Grade Scale: 100 ≥ A ≥ 90 ≥ B ≥ 78 ≥ C ≥ 67 ≥ D ≥ 56 ≥ F ≥ 0
SYLLABUS SUPPLEMENT -- Physics 1403, Summer Session II, 2016

Hints: Many find this course difficult & fast paced. This is made worse by the shortness of the summer session. Much dedication is needed to get a good grade (or to learn something!). If you have average intelligence & an adequate math background, you should spend at least 2 hours studying outside class for every class hour!! WHERE TO GO FOR HELP????????????!!!!

1. See Me!!! Room 018. 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 Lab TA!!! There will be office hours for this person.
3. NOTE AGAIN: Part of each lab period will be recitation/discussion devoted to solving homework problems. So come to each lab with homework questions for your TA!
4. Get a tutor!!! The Physics Department Office (Room 101) has an approved list.
5. Your Fellow Students!!! It is often a very effective strategy to work on homework assignments & to study for exams together in a group. I strongly recommend this! This is how people work in most professions! YOU’RE STRONGLY ENCOURAGED TO DO THIS! This is how most professionals work in “real life”!
If you don’t have friends in class, why not make some?
6. The Internet!!! There are HUGE numbers of Physics Help Web sites! Using Google & typing in “Physics Help” gives about 140,000,000 hits!!!! I encourage you to try out some of these.

BOTTOM LINE: Numerous help resources are available. Please take advantage of them!
If you need help and don’t get it, you have no one to blame but yourself!

IMPORTANT DATES
Monday, July 11: Last drop date with no penalty. Monday, August 1: Last drop date.
Mon., August 8: Last day to withdraw from TTU. Wednesday, August 10: Last class.
Friday, August 12: FINAL EXAM!! 11:00am–1:30pm. Monday August 15: Grades are due!

ACADEMIC INTEGRITY: Academic dishonesty (cheating, etc.) will not be tolerated! Students caught in this type of behavior will be punished to the extent allowed by TTU. See Student Handbook or Catalogue.

EXAMS/QUIZZES: The exams & quizzes in this course are composed uniquely for this semester. In fact, previous exams & quizzes (& solutions!) are downloadable from the course web page!

COPYRIGHT STATEMENT: Exams, quizzes, & lecture notes related to this course are copyrighted & owned by me! Homework problems & solutions are copyrighted & owned by the text’s author! Students in this course can freely download all of these from the course web page. No other reproduction or distribution is allowed!

CLASSROOM CIVILITY: You are expected to assist in maintaining an environment which is conducive to learning. To assure that all have an opportunity to gain from class time, you are prohibited from using cell phones, eating/drinking in class, making offensive remarks, reading newspapers, sleeping or engaging in any form of distraction. This includes talking to others while I’m lecturing! Inappropriate behavior in shall result in, minimally, a request to leave class.

ON TIME ATTENDANCE: Out of courtesy to me & to your classmates, please come to class ON TIME! It is very RUDE to noisefully barge into a room where a class is already underway! Similarly, it is very RUDE to leave in the middle of a class! Please do not come 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. If you have an expected reason to be late or to leave early, if possible, please try to let me know beforehand.

Bottom line: As Adults, you are expected to be courteous to me & to your classmates at all times!

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!