Physics 1403- 002

General Physics I

Spring 2013

Course Outline

Instructor: Jacob Ajimo Office Sc 122 Office Hours 2:00-3:00 pm M-F or by appointment. E-mail: juma.ajimo@ttu.edu

Required Text: *College Physics, Reasoning & Relationships*, by Giordano, *2nd edition. (Brooks/Cole)*

Course Objective

This course is intended to introduce students to the basic laws of physics, to develop a better understanding of physical science in general, and help prepare them for other upper division science classes. To this end, the course will emphasize a mix of conceptual understanding and standard "end-of-chapter" homework solving skills.

Course Coverage

This course is non-calculus introductory physics covering mechanics, heat, and sound, thus providing background for study in science-related areas. Time permitting; the course will cover material from the first 14 chapters in the text. We will cover Kinematics, Newton's laws, Energy, Momentum, Rotational Motion, Waves, Sounds, and Temperature and Heat

Class Time

You are expected to read the chapters indicated in the "Class Schedule" before coming to class. I will assume that you have read the material and discuss the concepts in class. Class attendance is strongly encouraged.

Homework:

Homework problems are assigned and graded on the web through the WebAssign. Once you are registered at that website you will be able to download the assignments. The assignments and due dates are posted. You will be able to retrieve the answers after the due date. Pay attention to the instructions on the homework website about how the homework is scored.

To access WebAssign you must register at the website http://webassign.net. Please do this ASAP. The WebAssign class key **ttu 3141 3535** . If you do not have a WebAssign Access Kit (part of the textbook bundle), you will need to purchase one through the WebAssign website. This website is not at TTU and you should give yourself plenty of time to submit answers.

The value of the assigned homework problems is that they are the basis of the problems on your exams. Doing well on the homework is crucial to your success in this course.

Exams

• There will be three in-class exams and a final exam.

• The exams are closed book. ONLY Calculators are allowed. Note cards, smart phones etc. are NOT allowed.

• The final exam is comprehensive (covering all chapters). The format is similar to that of in-class exams but will be longer.

• There will be **no make-up exams**.

Labs

Lab is a required portion of the course. Attended and participate actively in all the lab sessions, write up the lab, attend recitation, and learn how to do the problems. Recitation will help you with problems which figures into your homework grade and exam grades. Recitation is a very important part of the course.

Grading

The course grade will be based on the 3 in class exams, the final exam, on-line Homework, quizzes, and labs. NO MAKEUP EXAMS WILL BE GIVEN. Your letter grade will, tentatively, be determined according to the following scale: A (90-100), B (75-90), C (65-75), D (55-65) and F(0-55).

Exam 1	10%
Exam 2	10%
Exam 3	10%
Final Exam	25%
Homework & Quizzes	20%
Lab	25%
Total	100%

Core Competency Statement

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

Learning outcome	Assessment
Describe the basis of the scientific method	Ungraded pre- and post-tests, guided classroom discussion, in-class exams
Distinguish between a scientific theory and speculation	Ungraded pre- and post-tests, guided classroom discussion, in-class exams
Quantitative understanding of energy and motion	Guided classroom discussions, lab exercises, homework, in-class exams

Important Notes

Any student who, because of a disabling condition, 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 at 335 West Hall or 806-742-2405.

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.

"Scholastic dishonesty" includes, but it not limited to, cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, and any act designed to give unfair academic advantage to the student (such as, but not limited to, submission of essentially the same written assignment for two courses without the prior permission of the instructor) or the attempt to commit such an act.

Any student who intends to observe a religious holiday should make that intention known to the instructor prior to the absence. A student who is absent from class for the observance of a religious holiday shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.

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Tentative Class Schedule

Spring 2013

Week	Topic	Chapter	Tuesday	Thursday
1	Introduction	1		1/17
2	Motion, Forces and Newton's Laws	2	1/22	1/24
3	Forces and Motion in One Dimension	3	1/29	1/31
4	Forces and Motion in One Dimension Forces and Motion in two and three dimensions	3, 4	2/5	2/7
5	Forces and Motion in two and three dimensions	4	2/12	2/14 **Exam1**
6	Circular Motion and Gravitation	5	2/18	2/21
7	Work and Energy	6	2/25	2/28
8	Momentum, Impulse and Collisions	7	3/5	3/7 **Exam2**
9	**Spring break**		3/12	3/14
10	Rotational Motion	8	3/19	3/21
11	Energy and Momentum of Rotational Motion	9	3/26	3/28
12	Fluids	10	4/2	4/4 **Exam3**
13	Harmonic Motion and Elasticity	11	4/9	4/11
14	Waves	12	4/16	4/18
15	Sound	13	4/23	4/25
16	Temperature and Heat	14	4/30	5/2
17	Temperature and Heat	14	5/7	5/10 **Final Exam**

Important Dates

1/16 First Day of Class
1/21 Martin Luther King Jr. Day
3/9-17 Spring Break
4/1 No Classes
5/7 Last Day of Class
5/10 Final Exam