

Principles of Physics I

Physics 1408-002/-003

Spring 2013

Professor	Dr. David Lamp
Time	TR 9:30-10:50 / 12:30-1:50
Place	SC 7
Office	SC 23
Hours	2-3 daily and by appointment
E-mail	David.Lamp@ttu.edu PREFERED CONTACT METHOD!

Texts: *Physics for Scientists and Engineers with Modern Physics*, 8th edition, by Serway and Jewett bundled with WebAssign access code, published by Brooks/Cole CENGAGE. It is ordered and should be available at all 4 bookstores in town and on-line, prices vary. Any text version will do, we selected a loose leaf format for the bookstores (it is cheaper). The publisher screwed up the order and is offering the hardback text for the price of the loose leaf. The Laboratory Manual is available and may be bundled with the text at some bookstores.

Course Coverage: The course will cover material from chapters 1-22 in the text. We will cover kinematics, mechanics, statics, rotation, fluids, waves, and some thermodynamics. The depth of coverage will not be deep in parts of waves and thermodynamics.

Grading Policy: The following scores will be accumulated during the semester Labs, Recitation, On-Line Homework, Exam 1, Exam 2, Exam 3, and the comprehensive Final. The course grade will be based on the labs, recitation, on-line homework, three exams, and the final. **NO MAKEUP EXAMS WILL BE GIVEN.** The lowest grade of the 3 in-class exams and the final will be dropped. So, only the highest 3 of the 4 one-hour exams and final will count in determining your course grade. These exams count toward 70% of the course grade. The remaining 30% comes from the lab, recitation, and on-line homework equally. Your letter grade will, tentatively, be determined according to the following scale: 50 D; 65 C; 80 B; 90 A.

In-class exam I	Of these 5 scores, the lowest will be dropped. The remaining 4 count equally toward 70% of your class grade.	
In-class exam II		
In-class exam III		70% .
Final		
Final		
Lab		10% .
Recitation		10% .
Homework		10% .
Total		100% .
Extra Credit		5% .

Labs and Recitation: The lab portion of the course has a separate syllabus that you will receive in the lab. In short, do the lab, write up the lab, attend recitation, learn how to do the problems. Lab and recitation are required parts of the course. The Lab is an opportunity to learn the material from a hands-on perspective. Recitation will help you with problems which figures into your homework and exam grades. Recitation is very important and is potentially a very useful part of the course.

Homework: Homework problems are assigned and graded on the web through the commercial site 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 webassign.net. Make sure you get into the correct section of the course (Dr. David Lamp 1408 002 and 003). The class key is **ttu 8162 4769** for your section. The two lecture sections are merged on WebAssign. You will need to use your access code to sign in. You must self-register. Please use your name, in whatever form you want. Your student number is your R number and must be entered with the leading R, as is R12345678. If you do not have an access code (part of the text for the course), you will need to purchase one through the publisher's website. This website is not at TTU and you should give yourself plenty of time to submit answers. Sometimes the network can be slow or down. It behaves differently based on your bandwidth. For example, I cannot access the part of the website that alters homework assignments from my home. You may encounter similar issues. I cannot fix them. You must get to a place where you are connected well enough to do and submit your problems. Similarly, the WebAssign site can be finicky about web browser and versions.

The value of the assigned homework problems is that they are the basis for the problems on your exams. Doing well on the homework is crucial to your success in the course. ***The single best indicator of success in the course is success with the homework.*** We've done the experimental study, you must do the homework in order to do well in the course. Do not let the small percentage weight delude you into thinking these homework problems are in some way optional. The weight is kept small because we cannot verify who is actually responsible for your answers. The homework is the single best factor in determining how you will do in the course.

The homework will be made available during the weekend before the material is covered in lecture and will be due at 11:59 pm Sunday night after the material has been covered in lecture. Extensions are possible and will be no longer than 1 week after the posted due date. Do the homework when it is available. Do not assume you can do all of it at the end of the course. You can't.

Exams: Three in-class exams will be given. You may bring a 3x5 note card to each the exams. This note card can be used to list any equations or words that help you in solving physics problems. The in-class exams will be given in our normal classroom, Science 7. Exams start at 9:30 and end at 10:50.

Final: A comprehensive final exam will be given. Each lecture section will give its own final exam. You may bring 2 note cards to the final as well. Section -002 (the TR 9:30 class) will take their final on Thursday May 9 at 7:30 am. Section -003 (the TR 12:30 class) will take their final on Tuesday May 14 at 1:30 pm. The final will be given in our normal classroom, Science 7. The final begins at the appointed time and last two and a half hours.

Exams and Final: The 4 exams count 70% of the total course grade. Write down the scores from exam 1, exam 2, and exam 3, and the final twice. Strike out the lowest of these 5 numbers once. Thus, if your lowest score is on one of the first 3 tests, that test gets dropped while the final counts twice. If your lowest score is on the final, then the final is dropped 1 time, but remains 1 time.

EXTRA CREDIT: *LearnSmart*, a McGraw-Hill product is available for you to use. Info will be given out in lecture. It serves to guide you through how to approach Physics.

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

Learning Outcome	Assessment
Describe the basis of the scientific method	Embedded questions within the in-class exams
Distinguish between a scientific theory and speculation	Embedded questions within the in-class exams
Quantitative understanding of energy and motion	Guided classroom discussions, lab exercises, homework, many questions in the in-class exams

Important Notes:

ADA: 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.

Religious Holidays: A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.

Academic Integrity: 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. For details, see TTU OP 39.12.

Strategy for Success:

***Be prepared! Study your notes and read the material in the text *before* we cover it in class. This will help you keep up, will make for more productive classroom interaction, and will help keep you prepared for those unannounced in-class quizzes that will make up part of your semester grade.

***Begin all homework assignments as soon as possible. The assignments take time and thought. The test questions are based on the problems you do in the homework. Homework is essential to pass.

***Build a study group or join one. Students helping each other is very effective. Do not join a study group because you all share an interest in a football team or a particular flavor of music. You need a mix of strong and weak students.

***Once you can work through a problem with your notes, book, study group, etc., write the question down on a blank sheet of paper and then try to rework it entirely on your own a day or so later.

***Never wait until the night before a test to "begin" studying.

***The course schedule is fast. Don't get left behind.

***Come see your instructor when you get stuck--that's why they pay me the big bucks! I am always willing to help anyone who tries.

***There are also TAs, SI instructors, and help sessions available. Avail yourself of all resources.

TENTATIVE SCHEDULE Spring 2013 PHYS1408-002/-003

	R January 17 class 1 Scientific Method 1 Measurement
T January 22 class 2 2 One Dimension	R January 24 class 3 2 One Dimension
T January 29 class 4 3 Vectors	R January 31 class 5 3 Vectors
T February 5 class 6 4 Two/Three Dimensions	R February 7 class 7 4 Two/Three Dimensions
T February 12 class 8 5 Force Free Body Diagrams	R February 14 class 9 5 Force Free Body Diagrams
T February 19 class 10 Exam 1 (1-5)	R February 21 class 11 6 Circular Motion/Friction
T February 26 class 12 6 Circular Motion/Friction 7 Energy	R February 28 class 13 7 Energy
T March 5 class 14 8 Conservation of Energy	R March 7 class 15 8 Conservation of Energy
SPRING BREAK	SPRING BREAK
T March 19 class 16 9 Collisions	R March 21 class 17 9 Collisions
T March 26 class 18 Exam 2 (6-9)	R March 28 class 19 10 Rotation
T April 2 class 20 11 Angular Momentum	R April 4 class 21 12 Statics
T April 9 class 22 12 Statics	R April 11 class 23 13 Gravity
T April 16 class 24 14 Fluids	R April 18 class 25 14 Fluids
T April 23 class 26 Exam 3 (10-14)	R April 25 class 27 15 Oscillations 16 Wave Motion
T April 30 class 28 17 Sound 18 Standing Waves	R May 2 class 29 19 Temperature 20 First Law 21 Gases
T May 7 class 30 22 Second Law Special Relativity -003 12:30-1:50 class Final Exam T May 14 1:30-4:00 Science Room 7 (our normal classroom)	-002 9:30-10:50 class Final Exam R May 9 7:30-10:00 am Science Room 7 (our normal classroom)