



Syllabus: Physics 1 & Physics Lab 1 (Dual Credit)

Course Number: PHYS 1301 & PHYS 1101

Semester & Year: Fall 2024 (Extended)

Instructor Information

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Textbook Information

- College Physics by Dirks and Sharma Open Source Software Download free from: <http://openstaxcollege.org/textbooks/college-physics>

Student Learning Outcomes for PHYS 1301

Upon successful completion of this course, students will:

1. Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration.
2. Apply Newton's laws to physical problems including gravity.
3. Solve problems using principles of energy.
4. Use principles of impulse and linear momentum to solve problems.
5. Solve problems in rotational kinematics and dynamics, including the determination of the location of the center of mass and center of rotation for rigid bodies in motion.
6. Solve problems involving rotational and linear motion.
7. Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level.
8. Demonstrate an understanding of equilibrium, including the different types of equilibrium.
9. Discuss simple harmonic motion and its application to quantitative problems or qualitative questions.
10. Solve problems using the principles of heat and thermodynamics.
11. Solve basic fluid mechanics problems.

Student Requirements for Completion of the Course

- Classwork
- Tests
- Project (6)
- Final Exam
- Labs

Student Learning Outcomes for PHYS 1101

Specific laboratory objectives required by the Texas Higher Education Coordinating Board and available from the Lower-Division Academic Course Guide Manual are:

1. Demonstrate techniques to set up and perform experiments, collect data from those experiments, and formulate conclusions from an experiment.
2. Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.
3. Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration.
4. Apply Newton's laws to physical problems including gravity.
5. Solve problems using principles of energy.
6. Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level.
7. Use principles of impulse and linear momentum to solve problems.
8. Solve problems in rotational kinematics and dynamics, including the determination of the location of the center of mass and center of rotation for rigid bodies in motion.
9. Solve problems involving rotational and linear motion.
10. Demonstrate an understanding of equilibrium, including the different types of equilibrium.
11. Discuss simple harmonic motion and its application to quantitative problems or qualitative questions.
12. Solve problems using the principles of heat and thermodynamics.
13. Solve basic fluid mechanics problems.

Student Requirements for Completion of the Course

- Lab Experiment
- Lab Report Student

Student Assessment

- Students will be evaluated on a combination of lecture examinations, quizzes, articles and other class assignments, and a comprehensive final examination.
- The course will be broken up into unit topics. A variety of interactive, discussion posts, and practice quizzes will be assigned during each unit for practice or for a deeper understanding of content. At least one lab will be conducted for each unit. Each unit will conclude with a Quiz.
- High school grades will be reported each six weeks and calculated according to the Hooks High School Science Department grading policy: 35% unit tests, 30% daily work, 35% project/lab.
- The final grade for the Texarkana College course PHYS 1301 will be determined at the end of the course (May) and will be calculated by the following: 5% classwork, 10% quizzes, 20% Projects 50% exams, and 15% final exam.

Grade	%
A	89.5-100
B	79.5-89
C	69.5-79
D	59.5-69
F	59-below

Tutoring: Texarkana College Student Support Services has tutors available to assist chemistry students that need help with the course. They can help with the completion of homework assignments and laboratory assignments. These tutors are typically available in the Chemistry Building. Schedules will be posted.

GENERAL TEXARKANA COLLEGE COURSE POLICIES

Cell Phone Policy: All cell phones will be turned off and kept out of sight in class. If any phones are out while testing, I will assume you are cheating. There will be no talking on phones or texting while lecture and discussion is taking place. If you cannot abide by this policy, you will be asked to leave.

Attendance Policy: You are not required to attend lecture sessions. Success in college level courses is often closely correlated with classroom attendance and participation. The role will be called and a list of those absent maintained. If you make a grade of "F" for whatever reason the last day you attended class based on the class role will be recorded on the final grade sheet. This may impact your scholarships and future funding. It is possible that you will be asked to return money based on this date. Attendance and completion of laboratory assignments is mandatory. Students who miss more than three laboratories will be dropped from the class unless other arrangements are made with the laboratory instructor.

Classroom Behavior: In general, lectures and laboratories are conducted in a rather open fashion with adequate opportunity for students to interact with their instructors and with each other about biology. Excessive talking between students or other behavior that becomes a distraction to the instructor or class members will result in the student(s) being asked to leave the class. Please mute any electronic devices before attending course lectures. General behavior for students on campus is reviewed in the Texarkana College Catalogue and the Texarkana College-Student Handbook (<https://www.texarkanacollege.edu/>)

Missed Examinations: If you know in advance that you are going to miss an examination it is best to arrange with the instructor to take the examination early. If you miss an examination for reasons beyond your control, you should contact the instructor as soon after as feasible to make arrangements to take the examination. Examinations are typically graded promptly and returned. It is best to take a missed examination prior to the original being returned to the class for review. In cases of extended illness or disaster, accommodations can usually be made.

Missed Laboratory: Students who know they will miss laboratory should meet with the instructor to see if attending a laboratory on a different day of the week is feasible. Instructors are generally willing to help students who notify them promptly of their attendance problems and keep them up to date. Students who miss more than three laboratory sessions will be dropped from the course unless they have made other arrangements with the instructor.

Incomplete Grade Policy: Incompletes can be given if you complete 75% of the course work with at least a 70% average. Students who want an incomplete

grade should meet with the instructor and make a request for the grade and have a plan for completing the required work.

Withdrawal Policy: If you wish to drop the class, please do so yourself. The instructor will not be responsible, unless you make a specific request prior to the drop deadline. The drop deadline for each semester can be found in the Texarkana College Catalogue (<https://www.texarkanacollege.edu/>). After the drop deadline the student that fails to complete the class with a satisfactory grade will receive a grade of “F”. The student’s final attendance date will be reported with the grade of “F”.

Testing Center Policy: During the semester you may be asked to take examinations in the Texarkana College Assessment and Testing Center located in Room 11 of the Business and Computer Technology Building. The hours of operation, policies and procedures for the testing center can be found on the Texarkana College Web Page at <https://www.texarkanacollege.edu/>. The policies of the Texarkana College Assessment and Testing Center must be studied and closely followed.

Student Services: Student Services is located on the first floor of the Administration Building and offers many services to TC students. These include campus housing, student handbook, awards and recognition, student insurance, and scholarships. The web address is <https://www.texarkanacollege.edu/>.

Student Support Services: Student Support Services helps students by offering career information, tutoring, study skills, and college transfer information. Student Support Services is located in Room 106 of the Career Education Center. The Web page for Student Support Services can be found at <https://www.texarkanacollege.edu/>.

Academic Integrity Statement: Scholastic dishonesty, involving but not limited to cheating on a test, plagiarism, collusion, or falsification of records will make the student liable for disciplinary action after being investigated by the Dean of Students. Proven violations of this nature will result in the student being dropped from the class with an “F”. This policy applies campus wide, including the TC Testing Center, as well as off-campus classrooms or lab sites. For more information students should refer to the TC Student Handbook.

Disability Act Statement: Texarkana College complies with all provisions of the Americans with Disabilities Act and makes reasonable accommodations upon request. Please contact Larry Andrews at 903.823.3283, or go by the Recruitment, Advisement, and Retention Department located in the Administration building for personal assistance. If you have an accommodation letter from their office indicating that you have a disability which requires academic accommodations, present it to the instructor so we can discuss the accommodations that you might need for this class. It is best to request these changes at the beginning if not before the start of class so there is ample time to make accommodations. See Texarkana College Catalogue at: <https://www.texarkanacollege.edu/>

Financial Aid: Attention! Dropping this class may affect your funding in a negative way! If you drop, you could owe money to the college and/or federal government. Please check with the Financial Aid office before making a decision.