



PHY 309K: Elementary Physics for Nontechnical Students

Texas Common Number: PHYS 1305

Course Format: Online, Self-Paced

Course Instructor: Jennifer Palomino, Ph.D. Contact using the Inbox tool in Canvas.

Course Credits: 3

Prerequisites: Approval of the University Extension advisor.

How This Course Works

This course is online and is self-paced. Students have five months from their date of enrollment to complete the course. All coursework and proctored exams are submitted or taken online.

While this course is self-paced in terms of when you complete the work and submit assignments, periodic assessments are critical to ensuring that students receive adequate support and are able to achieve the intended learning outcomes. Thus, this course is organized into modules that must be completed in order. Students will only be able to move forward once they have received a grade on all assessments within a given module.

Review the course outline and assignment descriptions carefully. Computer-graded assignments are scored immediately. You can expect to receive feedback on instructor-graded assignments or exams within three business days following submission. This does not include weekends or holidays. Requests for expedited grading are not accommodated, so please plan accordingly. During certain times (end of semester, spring break, etc.), instructors may experience higher-than-usual demands on their time and may need additional time for evaluation. Students should reach out to University Extension at uex@austin.utexas.edu with any concerns regarding grading turnaround.

University Extension strongly advises students to be aware of when they may need a course grade to be recorded on their transcript. It can take up to two weeks after the final exam is complete for a grade to be officially recorded with the Office of the Registrar.

Course Overview

PHY 309K is the first in a two-course physics sequence designed for non-technical students. The course covers mechanics, heat, and sound. No prior physics or math is required beyond the high school level. This course is designed for students who do not intend to do further coursework in natural sciences, engineering, mathematics, or medicine. It is primarily conceptual in nature with some computational work. Explanations of everyday, observable phenomena are stressed whenever possible.

Required Materials

Griffith, W. T. & Brosing, J. (2015). *Physics of Everyday Phenomena*, 8th ed. New York, NY: McGraw Hill. ISBN: 9780073513904

(The digital version of the textbook available through McGraw Hill Connect is not supported.)

You must also purchase an online Quest subscription for this course (this purchase is non-refundable).

Course Organization

This course contains 14 lessons divided into 5 learning modules. You can work on the various items within a learning module in any order you wish, but you cannot move on to the next learning module until you have submitted all of your assignments and received a grade for each of them. Each lesson begins with a list of learning objectives and an assigned reading. A lesson overview highlights points of focus for the lesson or further explains important topics. Each lesson contains a computer-graded assignment, completed in Quest, and an instructor-graded assignment.

Computer-Graded Assignments

Every lesson contains a computer-graded assignment you will complete in Quest. You must complete all of the questions on each Quest assignment before your grade will be sent to Canvas. Most questions offer multiple "tries." You must either answer the question correctly or use all available tries before a question is considered completed.

Instructor-Graded Assignments

Every lesson also has an instructor-graded assignment. Most of these assignments contain an investigation and a quiz. The investigation will ask you to interact with an online physics simulation by making predictions, running scenarios, recording your results, and answering analysis questions. The quiz contains multi-part synthesis questions. You will submit your assignment in Canvas and receive graded feedback from your instructor. In some cases you will need to digitize your drawings or sketches; instructions are provided on the assignments where this is required.

Exams

This course has two exams, a midterm and a final. The midterm covers material from lessons 1 through 6, and the final is comprehensive, covering material from lessons 1 through 14.

You must pass the final exam to pass the course.

Course Outline

Module	Topics	Assessments
1	Lesson 1: Measurement and the Scientific Method	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 1 ▪ Instructor-Graded Assignment 2
	Lesson 2: Constant Motion	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 3 ▪ Instructor-Graded Assignment 4
	Lesson 3: Accelerated Motion	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 5 ▪ Instructor-Graded Assignment 6
2	Lesson 4: Projectile Motion	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 7 ▪ Instructor-Graded Assignment 8
	Lesson 5: Forces and Acceleration	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 9 ▪ Instructor-Graded Assignment 10
	Lesson 6: Newton's Laws	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 11 ▪ Instructor-Graded Assignment 12
MIDTERM EXAM		
3	Lesson 7: Circular Motion	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 13 ▪ Instructor-Graded Assignment 14
	Lesson 8: Gravitation	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 15 ▪ Instructor-Graded Assignment 16
	Lesson 9: Energy and Oscillations	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 17 ▪ Instructor-Graded Assignment 18
4	Lesson 10: Momentum	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 19 ▪ Instructor-Graded Assignment 20
	Lesson 11: Rotational Dynamics	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 21 ▪ Instructor-Graded Assignment 22
	Lesson 12: Fluids	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 23 ▪ Instructor-Graded Assignment 24
5	Lesson 13: Ideal Gases	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 25 ▪ Instructor-Graded Assignment 26
	Lesson 14: Vibrations, Waves, and Sound	<ul style="list-style-type: none"> ▪ Computer-Graded Assignment 27 ▪ Instructor-Graded Assignment 28
FINAL EXAM		

Grade Calculation

Your final grade for the course will be calculated as follows:

14 Instructor-Graded Assignments	40%
14 Computer-Graded Assignments	15%
Midterm Exam	20%
Final Exam	25%

You must pass the final exam to pass the course. You must also earn an overall passing grade:

A	100-93%	B+	89-87%	C+	79-77%	D+	69-67%	F	59-0%
A-	92-90%	B	86-83%	C	76-73%	D	66-63%		
		B-	82-80%	C-	72-70%	D-	62-60%		

Getting Help

- Technical Support: uextechsupport@austin.utexas.edu
- For content questions or questions about assignment and grades, use the Inbox tool within Canvas to contact the course instructor.
- For other questions (registration, transcripts, etc.), contact University Extension.

University Extension Policies

Full University Extension policies for self-paced courses may be found on the University Extension website.

Scholastic Dishonesty

Students in this course are expected to work independently, without direct supervision, and to conduct themselves responsibly in accordance with that freedom. To obtain the greatest benefit from their course work, and for the sake of everyone enrolled in our courses, students must demonstrate the willingness to exercise self-discipline, personal responsibility, and scholastic integrity.

We expect the course work and exams that you submit for course credit to be yours and yours alone. Plagiarism and other forms of scholastic dishonesty are serious academic violations that will not be tolerated. The penalties for scholastic dishonesty include the possibility of failure in the course. Scholastic dishonesty in examinations will automatically result in a grade of *F* on the exam and an *F* in the course.

University Extension Contact Information

uex@austin.utexas.edu

512-471-2900