

Elementary Physics (PHYS 1305)

CREDIT

3 Semester Credit Hours (3 hours lecture, 0 hours lab)

MODE OF INSTRUCTION

Online

PREREQUISITE/CO-REQUISITE:

N/A

COURSE DESCRIPTION

Conceptual level survey of topics in Physics intended for liberal arts and other non-science majors. May or may not include a Laboratory

COURSE OBJECTIVES

Upon completion of this course, the student will be able to

1. Define basic terminology as related to applied physics.
2. Apply relationships of length, mass, time, and energy to understand various types of motion, forces, and fields.
3. Demonstrate problem-solving techniques related to physics principles including: vectors, motion, mechanics, simple machines, matter, heat, thermodynamics, etc.
4. Answer conceptual level questions related to physics principles including: vectors, motion, mechanics, simple machines, matter, heat, thermodynamics, etc.

INSTRUCTOR CONTACT INFORMATION

Instructor: Bryan Neal

Email: bkneal@lit.edu

Office Phone: (409)247-5103

Office Location: MPC242

Office Hours: Appointments may be requested in Starfish

REQUIRED TEXTBOOK AND MATERIALS

1. *College Physics 2e* by Paul Peter Urone and Roger Hinrichs, 2022 Edition. OpenStax.
<https://openstax.org/details/books/college-physics>
2. Three-ring binder (2 inches recommended) with tabbed dividers.
3. Scientific calculator.
4. Pens or pencils.

Approved: Initials/date



**LAMAR INSTITUTE
OF TECHNOLOGY**

ATTENDANCE POLICY

Participation is vital to understanding Physics, so student activity will be recorded weekly in Starfish. If the student has 5 or more days of inactivity (according to Blackboard on Monday morning), then the student will be marked absent for the previous week. The student will receive a 20-point deduction from the Participation grade for each absence. **In an online class, these absences cannot be excused or made up.**

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

COURSE CALENDAR

Week	TOPIC	READINGS	Folder	Due
1	Introduction, Kinematics	CH1, CH2	1A	Su, 09/01
2	2-D Kinematics, Dynamics	CH3, CH4	1B	Su, 09/08
3	Applications of Newton's Laws	CH5	1C, TEST	Su, 09/15
4	Circular Motion, Work, Energy	CH6, CH7	2A	Su, 09/22
5	Momentum, Statics, Torque	CH8, CH9	2B	Su, 09/29
6	Rotational Kinematics	CH10	2C, TEST	Su, 10/06
7	Fluid Statics, Fluid Dynamics	CH11, CH12	3A	Su, 10/13
8	Temperature, Gas Laws, Kinetic Theory	CH13	3B	Su, 10/20
9	Heat Transfer, Phase Change	CH14	3C, TEST	Su, 10/27
10	Oscillations, Waves, Sound	CH16, CH17	4A	Su, 11/03
11	Electric Charge, Ohm's Law	CH18, CH20	4B	Su, 11/10
12	Circuits, Magnetism, Induction	CH21, CH22, CH23	4C, TEST	Su, 11/17
13	Electromagnetic Waves, Relativity	CH24, CH28	5A	Su, 11/24
14	Quantum Physics, Atomic Physics	CH29, CH30	5B	Su, 12/01
15	Radioactivity, Nuclear Physics	CH31	5C, TEST	Su, 12/08
16	MANDATORY Final Exam	EVERYTHING	6, FINAL	<u>Tu</u> , 12/10

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

1. Module Tests (5) 25%
2. MANDATORY Final Exam 20%
3. Conceptual Assignments (15) 15%
4. Analytical Assignments (15) 15%
5. Discussion Activities (15) 15%
6. Attendance/Participation 10%

GRADE SCALE

- 90-100 A
- 80-89 B
- 70-79 C
- 60-69 D
- 0-59 F

TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at <https://lit.edu/online-learning/online-learning-minimum-computer-requirements>. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

STUDENT CODE OF CONDUCT STATEMENT

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

ARTIFICIAL INTELLIGENCE STATEMENT

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI/ChatGPT in their courses

STARFISH

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

ADDITIONAL COURSE POLICIES/INFORMATION

1. Safety and etiquette must always be observed. A student who breaks safety rules or does not conduct themselves properly will be removed from class to ensure the safety and comfort of others.
2. Children and/or guests are not allowed in the lecture classroom, the laboratory room, or the instructor's office at any time. This includes scheduled meetings.
3. If class times and/or delivery method are incompatible with a student's needs, then the student is responsible for switching to a different class section in the first week.
4. Due to rounding limitations in the Blackboard software, an 89.49999 is considered indistinguishable from an 89.5 and a student with this grade would receive an "A." Aside from this example, "creative rounding" is not applied.
5. Each module has several electronic assignments due in the order indicated in the Course Calendar in this Syllabus and following the due dates set in Blackboard.
6. Students are expected to maintain physical and/or digital copies of all resources and scratch work. Course material is "recycled" throughout the semester, and most Activities provide "hints" for the Module Tests and/or the MANDATORY FINAL Exam.
7. Late assignments will receive a deduction of 20 points unless otherwise stated in the instructions.
8. The Final Exam cannot be late for ANY reason. The semester ends when the Final Exam is due.
9. In the first half of the week, students should strive to contribute to the Discussion Activities and complete the Conceptual Assignment.
10. Conceptual Questions should be fairly easy to find in the textbook. Because these have a large overlap with the Discussion Questions, this may be a good way to start making progress each week.
11. By the end of the week, students should strive to complete the Analytical Assignment and read the Discussion Posts of others.
12. The Analytical Assignments have videos embedded above each question. These videos should serve as examples to help the student answer their randomized versions of the questions.
13. Students will be notified by Announcement and/or Email if any policies or dates change.