



**LAMAR INSTITUTE  
OF TECHNOLOGY**

## Elementary Physics Laboratory (PHYS 1105)

### **INSTRUCTOR CONTACT INFORMATION**

Instructor: Bryan Neal  
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Office Location: MPC 242  
Office Hours: TBA

### **CREDIT**

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

### **MODE OF INSTRUCTION**

Hybrid

### **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.

### **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.

## ATTENDANCE POLICY

Attendance in class is vital to understanding Physics, so absences will be recorded weekly in Starfish. An absence may be excused with proper documentation, but each unexcused absence from a scheduled class meeting will result in a 20-point deduction from the Attendance grade.

## DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the [Academic Calendar](#). If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

## STUDENT EXPECTED TIME REQUIREMENT

For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16-week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

## COURSE CALENDAR

WEEK	TOPIC	PRECLASS READINGS	REQUIREMENTS
1	Introduction, Kinematics	CH1, CH2	MF1A
2	2-D Kinematics, Dynamics	CH3, CH4	MF1B
3	Applications of Newton's Laws	CH5	MF1C, M1T
4	Circular Motion, Work, Energy	CH6, CH7	MF2A
5	Momentum, Statics, Torque	CH8, CH9	MF2B
6	Rotational Kinematics	CH10	MF2C, M2T
7	Fluid Statics, Fluid Dynamics	CH11, CH12	MF3A
8	Temperature, Gas Laws, Kinetic Theory	CH13	MF3B
9	Heat Transfer, Phase Change	CH14	MF3C, M3T
10	Oscillations, Waves, Sound	CH16, CH17	MF4A
11	Electric Charge, Ohm's Law	CH18, CH20	MF4B
12	Circuits, Magnetism, Induction	CH21, CH22, CH23	MF4C, M4T
13	Electromagnetic Waves, Relativity	CH24, CH28	MF5A
14	Quantum Physics, Atomic Physics	CH29, CH30	MF5B
15	Radioactivity, Nuclear Physics	CH31	MF5C, M5T
16	MANDATORY Final Exam	EVERYTHING	MFE

## **COURSE EVALUATION**

Final grades will be calculated according to the following criteria:

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

## **GRADING SCALE**

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

LIT does not use +/- grading scales

## **ACADEMIC DISHONESTY**

Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution's Academic Dishonesty Policy available in the Student Catalog & Handbook at <http://catalog.lit.edu/content.php?catoid=3&navoid=80#academic-dishonesty>.

## **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](mailto: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](http://www.lit.edu). Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

## **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 online Module Tests and/or the online 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. Before the weekly meeting, students should strive to complete the PreLab Assignments, and contribute to Discussion Activities.
10. By the end of the week, students should strive to read all of the Discussion Posts of others.
11. The weekly class meeting will be reserved for a practical or simulated activity and a Lab Assignment.
12. Lab Assignments can be completed electronically in the Lab room, or students can take notes and complete the Lab Assignment at a later date.
13. Students will be notified by Announcement and/or Email if any policies or dates change.