

# Physics

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Discover the secrets to the universe through Lee College's physics program, whether you are an aspiring scientist, engineer, or someone simply searching for an amazing science elective. In our physics courses, you will have the chance to learn about the everyday world around you as well as dive into the "impossible." Indeed, far more is possible than most people can imagine (such as invisibility or how you might time-travel without violating any known laws of physics, and much, much more).

For those who want to take an incredible journey toward becoming a physicist, we offer an Associate of Science degree as a foundation for a bachelor's degree at a four-year university. Students will gain an understanding of our universe, critical thinking, teamwork, and problem-solving appropriate for a profession in physics.

For those pursuing technical fields, we offer a wide range of courses in support of your studies.

For those who are simply searching for a general science elective, we offer courses in the physics of science fiction (TV shows, movies, etc.) as well as courses in astronomy. We also offer specialized courses for those in select majors, such as education.

**Many careers require education beyond the associate degree. Students should work with their advisor to tailor course selections to align with their chosen transfer university. The transfer plan on this page shows an example of courses commonly transferred to universities. Students may choose to continue their education at any university.**

## What Will I Learn?

You will learn the principles and applications of physics, such as mechanics, astronomy, thermodynamics, electromagnetism, light, and sound. You will also learn key concepts that apply to other STEM courses, such as chemistry, geology, and meteorology.

[View Program Learning Outcomes](#)

## "What Can I Do With This Course of Study?"

Students majoring in physics can often select from a wide variety of career fields and disciplines including:

- Physicist
- Engineers
- Physicians
- Dentists
- Veterinarians
- Patent law
- Education
- Finance
- Energy sector

- Astrophysics
- High energy physics
- Cosmology
- Condensed matter
- Physical Oceanography

Note: Physics provides a quality foundation for these careers and disciplines. Specializations require further training and/or coursework in the relevant content area.

## Physics Nonspecific Transfer Plan

Please note that MATH 1314 & MATH 2412 are pre-requisites for MATH 2413. This plan includes course options for transferring into the PHYSICS BS without a specific transfer institution. # Students will need to work with an advisor to customize the plan once a transfer school is selected. The plan includes more than the 60 hours required for an Associate of Science and allows students to complete additional bachelor's degree requirements before transfer.

**Foundations: These are the courses students need in order to progress in their career/college pathway, as they either provide a certificate or lay the groundwork for moving to the next set of courses.**

Course	Lee College Course Title	Transfer School Counts Toward
EDUC 1200	Learning Frameworks	
ENGL 1301	English Composition 1	
CHEM 1411	General Chemistry 1; Lecture and lab	
MATH 2413	Calculus 1	
HIST 1301	History of the United States to 1877	
SBS Option	Select one course from the SBS Core Component Area	
PHYS 2425	University Physics I	

**Knowledge Building: These courses further the students' knowledge in the area of study and increase their preparation for the degree completion.**

Course	Lee College Course Title	Transfer School Counts Toward
MATH 2414	Calculus 2	
SPCH 1315	Principles of Public Speaking	
CHEM 1412	General Chemistry 2; Lecture and lab	
PHYS 2426	University Physics II	
ARTS 1303 or 04	Art History 1 OR Art History 2	
GOVT 2305	Federal Government	

LPC Option	Select one course from the LPC Core Component Area
ENGL 1302	English Composition 2

**Completion: These are the courses the student needs in order to complete the degree plan and prepare to enter the workforce.**

	Lee College	Transfer School
Course	Course Title	Counts Toward
MATH 2415	Calculus 3	
MATH 2318	Linear Algebra	
HIST 1302	History of the United States since 1877	
GOVT 2306	Texas Government	

## General Science Elective Course Options

These courses can be used to fulfill your general science elective. And if you are going to take a science course, why take one that will show you just how amazing our universe actually is?

Don't worry, even though these courses have a PHYS in front of them, there will not be much math required! These general elective courses tend to focus primarily on the IDEAS as opposed to breaking out your calculator every few moments (we save the challenging calculations for the other physics courses!)

### PHYS 1403 — Stars and Galaxies

An astronomy course that will allow you to explore our vast universe! Learn about wonders in our universe such as the beautiful stars in the night sky, black holes, other galaxies, and much more!

### PHYS 1404 — The Solar System

Our other astronomy course that show you how to explore the universe from your own backyard! We will discover the wonders of our nearest neighbors in the universe. And answer questions such as: which planets or moons might be the best places to colonize? What would it be like standing on the surface of Venus or Mars? What wonders await us as we prepare to one day send our astronauts beyond the Earth and Moon?

### PHYS 1415 — Physical Science I

EDUCATION MAJORS! This is the course for you! PHYS 1415 was developed by Physics Education Researchers to not only teach you the science topics, but also HOW to teach science. This course will prepare you to teach even the toughest TEKS! You will learn some of the most powerful educational reforms ever discovered and how to use them in your own classes! You will leave PHYS 1415 with a huge set of science activities that you will be able to use in your classroom the next day!

### PHYS 1417 — Physical Science II

EDUCATION MAJORS! This is a continuation of the fun from PHYS 1415! Learn about even more educational reforms! More amazing science! And be even better prepared to teach those tough TEKS!

## **PHYS 1317 — Physical Science II**

SCI-FI Physics! Yes, this is the general science elective for those who are Sci—Fi fans! Do you enjoy superhero movies? Are you a fan of space movies like Star Wars or Star Trek? This is the class for you! We will explore TV shows, movies, etc. to discover what is real is what is ridiculous! By the way, this course can be taken **WITHOUT** taking PHYS 1415 first, and so you can dive right in!

## **Physics Courses for Technical Degrees**

In general, physics courses are sorted by the level of math required. Be sure to check your degree plan and track to ensure that you are signing up for the correct physics course. For the most part, more advanced math based courses generally can be counted in lieu of a less mathematically advanced course (although, the more mathematically advanced course are considered far more challenging!).

### **PHYS 2425, 2426 — University Physics**

These are the calculus-based physics courses. Generally, students majoring in physics, chemistry, engineering, computer science, and math majors will be required to take these courses.

### **PHYS 1401, 1402 — College Physics**

These are the algebra-based physics courses. Generally, biology, environmental science, some process technology degree tracks (but not all), along with architecture and other technical degree plans will enroll in these courses.

### **PHYS 1405, 1407 — Conceptual Physics**

These are the conceptual physics courses. Some process technology degree tracks allow the student to take either 1401 or 1405 (though, the 1401 class is the more challenging course mathematically speaking). This is also a good course for those needing a general science elective.

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## **Contact Info.**

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