



**E**instein. Newton. Hawking. Feynman. What do these people have in common? Of course they're all physicists, but they were also teachers. Passing knowledge along to the next generation is essential, and at Loyno we can prepare you to do it as a high school teacher. You will learn how to investigate and articulate the laws that govern our universe—from the largest scales of the entire cosmos, to the smallest subatomic particles, and everything in between. Biophysics, quantum optics, cosmology, material science, computer simulations – are all areas of research pursued by our faculty, and areas where you could contribute too! The great geniuses of physics have pushed the understanding of our universe forward and then passed that understanding along to the next generation. At Loyno, we'll give you the tools you need to be part of that adventure.

## This is the place.

A city as colorful as the scope of your passions—that's what New Orleans can offer you that you won't find elsewhere. Ours is a vibrant city where you'll get an education in culture, history, and the arts just by walking outside. Balancing out the analytical and scientific elements of your degree, New Orleans is the perfect supplement for this unique concentration with its inescapable culture and history.

Our flexible program allows you to complete a full physics curriculum while giving you freedom in choosing liberal arts courses. At Loyno, undergraduate students are encouraged to collaborate with faculty on research projects, and our department offers use of sophisticated computational and laboratory research facilities that live up to our students' research ambitions. Our teacher certification program also will prepare you to teach grades 6-12 after graduation. Whatever your goals, we'll help you reach them.

## Courses

In addition to the foundational sequence of science and mathematics courses, you'll select liberal arts electives while moving into more advanced areas in physics. And the teacher's certification included in the program will prepare you to teach grades 6-12.

### Introduction to Electromagnetism and Relativity

This first-year course discusses electric and magnetic phenomena. It culminates in an elementary treatment of Maxwell's equations. The course also discusses Einstein's special theory of relativity and its consequences to near-speed-of-light travel.

### Introduction to Waves and Quantum Physics

This sophomore course introduces students to the wonderfully weird world of quantum particles. After some preliminary treatment of wave phenomena, the course focuses on experimental foundations of quantum physics. Finally, it discusses the Schrödinger equation and the different interpretations of quantum mechanics.

### Cosmology

This course combines observation results and theory to teach students about our universe (the space curvature, dark energy, dark matter, etc.). It traces back the universe's history, from the earliest moments till the formation of large-scale structures that we see in our night sky, the stars, and galaxies.