



## COURSES

In your first three years here, you'll take core physics courses, including lectures and labs for hands-on experience. You'll then take engineering coursework at another university to complete the program. Here's a sample of what you can expect to learn and do:

### **Introduction to Electromagnetism and Relativity**

This freshman 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.

### **Advanced Laboratory Physics**

Students conduct experiments not ordinarily done at the elementary level. Experiments are performed in such areas as electronics, mechanics, atomic physics and spectroscopy.

**EINSTEIN AND O'SHAUGHNESSY.** Newton and Bandel. What's the link between these sets of physicists and engineers? You. You'll get your physics degree at the same time you're preparing for a career in engineering -- your first three years will be physics curriculum here at Loyno and then your last two years will be engineering coursework at another university of your choice. If you want to build a new electronic device, come up with an original bridge design, or invent new nanophotonic materials, there's no better supplement to a student of structures than a concentration in the science that governs, among other things, what's possible to build. At Loyno, we'll teach you the rules of electricity, magnetism, gravity and motion, so that you can make a career out of designing structures that defy them.

### *Possible Careers:*

- Mechanical engineer
- Electrical engineer
- Civil engineer
- Biomedical engineer
- Material science

**ATTENDING LOYOLA** means being in the heart of New Orleans. Our campus is located in the city's historic Uptown neighborhood, just a short drive from the Central Business District, the city's hub of innovation and strategic thinking. You'll learn to hone your talents in the city named #1 new brainpower city in America and the #5 city in the U.S. for women in tech.