PHYSICS

OUR PROMISE TO YOU

A major in physics at Kentucky Wesleyan College prepares students for technical employment or for entrance into graduate study in physics, medical physics, engineering or a related field. As a physics student, you will:

- Understand the role of physics in the sciences and society.
- Understand the basic principles and foundations of physics.
- Understand and use the methods and techniques in experimental physics.
- Develop computer programming skills.
- Develop technical communication skills.

EXCEPTIONAL PREPARATION

Approximately 40 percent of all physics bachelors degree recipients enter the workforce immediately after graduation, about 35 percent pursue graduate degrees in physics or astronomy and about 20 percent pursue a graduate degree in another relevant field.

GET INVOLVED

The Wesleyan Fellows program will enrich your college experience and enhance your career opportunities. This grant-based work-study program encourages creative thinking and resourceful problem-solve and you will gain valuable knowledge and skills with a Wesleyan professor or an off-campus supervisor as your mentor. For more information on Wesleyan Fellows, visit ***kwc.edu/wesleyan-fellows.***

SCHOLARSHIPS & ASSISTANTSHIPS

Many physics majors at Kentucky Wesleyan receive academic scholarships. Some also serve as assistants in laboratories, classrooms and offices. Assistantships provide valuable learning experiences for students and contribute to the student's tuition.

KENTUCKY WESLEYAN COLLEGE
1858

CAREERS

- Automotive Engineer
- Computer Systems Analyst
- Environmental Compliance
- Geophysical Data
- Lab Technician
- Quality Control Analyst
- Regulatory Affairs Specialist
- Software Quality Assurance
- Teacher/Professor
- Web/Software Developer

Contact Admissions:
270-852-3120
admissions@kwc.edu

find yourself

Courses Offered

Kentucky Wesleyan education is all about preparing you to pursue a productive career and a full, meaningful life. Each major offers unique courses designed to get you ready for a professional career in that field of study. Below, learn more about some of the courses you can expect to take with this major:

Scan me to discover more information about your major and the others we offer!

PHYS 101: Introduction to Physics in Modern Medicine
3 Semester Credit Hours

Modern medical applications of physics are studied. This course introduces the technologies important to modern medicine and the basic physical principles which underlie them. Topics covered include endoscopes and laparoscopic surgery, laser surgery, photodynamic therapy, ultrasound imaging, x-ray and radionuclide imaging, computed tomography (CT) scans, positron emission tomography (PET) scans, radiation therapy, and magnetic resonance imaging (MRI).

PHYS 102: Physics and the Arts
3 Semester Credit Hours

Analyses of the physics of light and sound and how our eyes and ears detect them. Understanding the physics of light and sound is intended to increase the appreciation for works of art and music, and may even stimulate the artists and musicians among the students to deepen their knowledge of their media, of how people interface with them, and perhaps improve their art/music.

PHYS 103: Observational Astronomy
3 Semester Credit Hours

This course will generally introduce the student to various astrophysical concepts and theories which describe, scientifically, our known universe. Emphasis will be placed on observational astronomy – i.e., the student will routinely examine astronomical objects (e.g., planets and stars) through a high-quality computerized telescope. Additionally, we will examine rare meteorites (Martian, lunar, etc.) on a daily basis.

PHYS 141: Introductory General Physics I
4 Semester Credit Hours

Mechanics, heat and sound are studied. Derivations and applications of simple formulas using algebra and trigonometry are stressed. Problem solving is a basic part of the course. Three hours lecture and 2-hours laboratory per week.

PHYS 142: Introductory General Physics II
4 Semester Credit Hours

A continuation of Physics 141. Electricity, magnetism, light and selected topics of modern physics are studied. Derivations and applications of simple formulas using algebra and trigonometry are stressed. Problem solving is a basic part of the course.

PHYS 204: General Physics I
4 Semester Credit Hours

Mechanics, heat and sound are studied. Derivations and applications of formulas using calculus are stressed. Problem solving is a basic part of the course.

PHYS 205: General Physics II
4 Semester Credit Hours

A continuation of Physics 204. Electricity, magnetism, light and selected topics of modern physics are studied. Derivations and applications of formulas using calculus are stressed. Problem solving is a basic part of the course.

PHYS 301: Electricity and Magnetism
3 Semester Credit Hours

An intermediate course in electricity and magnetism, which includes electric fields, special methods of solutions of electrostatics, energy, force potentials, magnetic fields, electromagnetic waves, and radiation.

PHYS 302: Mechanics
3 Semester Credit Hours

An intermediate course in mechanics, which includes particle dynamics, rigid bodies, conservative force fields, theory of small oscillations, and the special theory of relativity.

PHYS 307: Readings in Physics
1-3 Semester Credit Hours

Special topics in physics are assigned by the instructor. The student should expect his readings to include historical concepts, philosophical implications, and modern trends in physics.

PHYS 340: Electronics
4 Semester Credit Hours

Includes the study of basic circuits, filters, the fundamentals of transistors, power supplies, amplifiers, and selected special circuits.

PHYS 342: Heat and Thermodynamics
4 Semester Credit Hours

Theoretical and experimental aspects of physical chemistry with emphasis on chemical thermodynamics and quantum theory of atomic structure.

PHYS 308: Modern Physics
4 Semester Credit Hours

Introduction to the special theory of relativity, elementary concepts of quantum mechanics, and selected topics in atomic and nuclear physics. The standard modern physics experiments will be performed.

PHYS 401: Introduction to Quantum Mechanics
3 Semester Credit Hours

Introduction to quantum mechanics with emphasis on the Schrödinger equation and its applications.