

Physics

Physicists study the universe, from the smallest subatomic particles to the largest clusters of galaxies. Our imaginations are challenged by the study of relativity and quantum mechanics, while the practical application of physics leads to innovations in many areas, including computers, medical technology and sustainable energy sources.

Why Physics at Illinois Wesleyan?

- An overwhelming majority of IWU Physics graduates start on very rewarding career paths right after graduation. Many of them pursue graduate degrees with the help of full-tuition waivers and healthy stipends.
- IWU Physics offers more hands-on laboratory courses than any other university in the midwest. Nationally, only one other undergraduate-only college offers more lab courses.
- Elective courses in optics, electronics, imaging, theoretical and observational astrophysics, biophysics and materials physics prepare students to work in a variety of fields.
- Students benefit from IWU's emphasis on the liberal arts: Writing, quantitative reasoning, critical thinking and discussion, oral communication and problem-solving are an integral part of every physics course.
- Students have extensive research opportunities involving state-of-the-art technology. The physics curriculum at IWU is as much a hands-on, experiment-based investigation as it is a theoretical and mathematical discipline

Support from Quality Faculty and Strong Student Community

The student-faculty relationship is the most important element of undergraduate education. Learning at Illinois Wesleyan is enhanced by the individualized instruction and attention students receive from our faculty. Faculty members work closely with students answering questions in and out of class, acting as mentors and academic advisors, and collaborating with students on independent study or directed study projects. All IWU physics faculty hold doctorates or other advanced degrees in the field, and maintain ongoing research programs in contemporary areas of physics.

- **Bruno deHarak**, Department Chair, Associate Professor of Physics; Ph.D. — University of Kentucky. Specializes in experimental atomic physics, laser assisted scattering experiments.
- **Narendra Jaggi**, Professor of Physics; Ph.D. — University of Mumbai. Specializes in condensed matter physics, correlated electron systems, and nonlinear chemical oscillators.



"Physics is the liberal arts education for a technological society."

— Joseph Pimbley

A Sampling of Courses Offered by Physics

Electricity, Magnetism and Optics
Electronics
Energy and Society
Fundamental Astronomy
Introduction to Astronomy and Astrophysics
Introduction to Quantum Mechanics
Mechanics
Modern Physics and Thermodynamics
Materials Physics
Mathematical Methods of Physics
Momentum of the Photon
Optical Physics
Problems of Nuclear Disarmament
Scientific Imaging

Recent May Term Courses in Physics

Experimental Physics
Sound, Music and Hearing

—continues



“Physics students at Illinois Wesleyan are grounded in the basic concepts of physics and challenged to apply their knowledge to the world around them.

- **Thushara Parera**, Associate Professor of Physics; Ph.D. — Case Western University. Specializes in experimental/observational cosmology, optical properties of cosmic dusts in the laboratory.
- **Gabriel Spalding**, Professor of Physics, Ph.D. — Harvard University. Specializes in condensed matter physics, lasers, using holographically textured fields to trap and manipulate matter.

Undergraduate Research at Illinois Wesleyan University

Faculty members of the Physics Department at Illinois Wesleyan conduct world-class research in areas that are accessible to undergraduates. The opportunity to participate in significant research appeals to a wide range of students, serving as a useful paradigm in the classroom while providing valuable experience for the students working directly on each project. It is our belief that strong research experiences will engage our students, enhance their development, and lead to new and greater opportunities for them in the future.

Physics majors from Illinois Wesleyan University have won the prestigious national Barry Goldwater Scholarship in the sciences multiple times. Research in the department has been sponsored by the National Science Foundation, NASA, the American Petroleum Institute, the American Astronomical Society, the Council on Undergraduate Research, and the Research Corporation. Many of our students also conduct research during the summer, either on campus with IWU faculty or at leading national universities and federal research laboratories, where they often work closely with Ph.D. students. Summer research activities are generally accompanied by scholarships and stipends for the students.

Outstanding Success of Graduates

Graduates of our physics program participate in a vast array of rewarding careers. Our alumni include executives of major corporations, engineers, high school physics teachers, scientists, accelerator operators, university professors and applied industrial physicists all around the world. Many of our graduates have continued their study of physics and engineering at leading institutions nationwide, including Washington University, Brown, Harvard, Princeton, Stanford, Yale, University of Chicago, University of Illinois, University of Minnesota, University of Wisconsin and many others.

They learn valuable laboratory skills that support and enhance the theoretical side of their coursework. Beyond the classroom, they carry out research with faculty members; participate in internships in science, industry and engineering; and work closely with their peers. IWU physics majors are well prepared to go into careers in the sciences, engineering or medicine.”

Dr. Bruno deHarak

Chair and Associate Professor of Physics



ILLINOIS WESLEYAN
UNIVERSITY

For Further Information, Write or Call:

Dr. Bruno deHarak

Department Chair, Physics
Illinois Wesleyan University
P.O. Box 2900
Bloomington, IL 61702-2900
309/556-3661
bdeharak@iwu.edu

www.iwu.edu/physics