

For students interested in biophysics or medical physics

Biophysics as a field is one of the broadest within physics. People trained in biophysics can end up in a wide variety of jobs in a number of areas. Some are:

- Research Scientists in physics of living systems in academic labs, government research labs, or private companies: research areas include statistical physics of collective behaviors, neuroscience, single cell biophysics, evolutionary biology and population genetics, immunology, cellular biomechanics, molecular dynamics, etc.
- Biotechnology and Pharmaceutical Industry: from drug design to cancer therapy design, primarily with the help of machine learning approaches, grounded in physics and chemistry of biological interactions
- Computational Biology/Bioinformatics: With expertise in physics and computational modeling, biophysicists can work in bioinformatics, analyzing biological data, developing algorithms, and modeling biological systems.
- Biomedical Engineering: Biophysicists can contribute to the development of medical devices, prosthetics, and diagnostic tools. They may work on projects involving the design and optimization of sensors, implants, or imaging technologies.
- Radiation oncology: using subatomic particles to attack cancer – sometimes called medical physics)
- Imaging living systems: from the Angstrom (electron microscopy) to the global (satellite imagery of ecosystems) scale as well as at the cellular level (light microscopy)
- Medical device engineering (from smart polymers that release drugs on command to designing magnetic resonance imaging systems)
- Applying physics to biological measurements: from x-ray crystallography of proteins to measurements of current through ion channels to sequencing DNA by pulling it through a biological nanopore.
- Science Communication and Journalism: Some biophysics graduates choose to work as science writers, journalists, or communicators.

We recommend that students with interests in pursuing careers in biophysics, medical physics, and related areas get in touch with one of the faculty working on biophysics in the physics department. There are also faculty in other departments that work in related fields:

- [David Baker](#) (Protein Design, Biochemistry)
- [Adrienne Fairhall](#) (Physiology, Biophysics, Applied Math)
- [Kristie Hendrikson](#) (Radiation Oncology)
- [Paul Kinehan](#) (Radiology, Bioengineering)