Biophysics Graduate Program

UNIVERSITY OF NOTRE DAME | SCIENCE

For more information about the Biophysics graduate program, application fee waivers or information about opportunities for graduate research at the University of Notre Dame, please contact us at **biophys@nd.edu.**

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biophysics.nd.edu

UNIVERSITY OF NOTRE DAME | BIOPHYSICS

STUDENT *VOICES*

The resources that Notre Dame offers to its students are the best of all graduate schools I applied to. We have so many core facilities that offer a wide range of research opportunities as well as the grant and fellowship writing department. That combined with the opportunities for career development and the graduate student union provide a strong foundation for success. In addition, the size of the program provides individual attention to each student as well as a "family-like" support.

Jacob Wagner, Third year

Papa Kobina Van Dyck, Second year

Notre Dame Biophysics offered the academic and interdisciplinary freedom I looked for in a graduate program. During my time here, I have explored my interests in computational and molecular biophysics with access to a myriad of resources. Biophysics at ND also offered the support I needed in graduate school through the tight-knit community and regular check-ins from our program directors.

I was drawn to Notre Dame's Biophysics Graduate Program because it offered me the opportunity to pursue a truly interdisciplinary degree, combining different research fields and perspectives. The program gives me the opportunity to learn directly from physicists, chemists and biochemists on topics ranging from mapping protein structures to computational modeling for drug design. This variety of perspectives creates a truly broad-based research environment, with a wide range of supportive faculty.

Tatiana Rosales, Third year

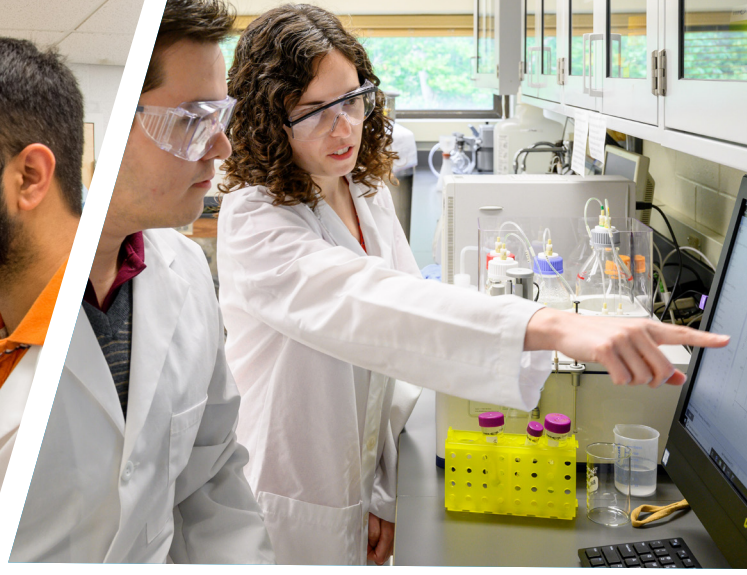
Biophysics at Notre Dame

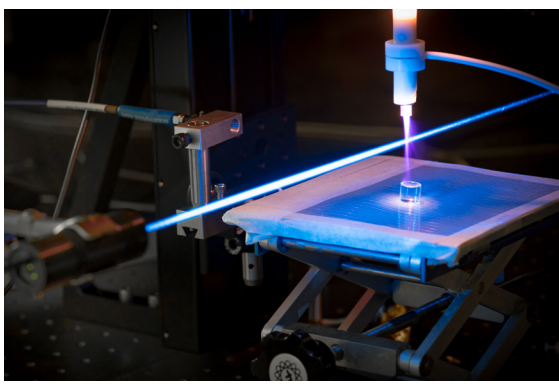
Working at the intersection of physics, biology, and chemistry

Biophysics enables scientists working at the intersection of physics, biology, and chemistry to collaborate with clinicians, mathematicians, and engineers to develop a predictive understanding of biological processes, including cancer, development, infection, and the immune system.

The University of Notre Dame has a rich history of molecular biophysics research across disciplines. The recent establishment of the new Stavropoulos Center for Interdisciplinary Biophysics strengthens these efforts across campus.

The Notre Dame biophysics curriculum seeks an integrative approach, familiarizing students with basic principles that will allow the exploration of new synergies between biology and physics.





Our vibrant Notre Dame Biophysics community comprises students and researchers working on cutting-edge, cross-disciplinary projects, faculty who are leaders in their research areas, award-winning teachers and mentors, and world-class scientific facilities. We are committed to student success, providing assistance with fellowship applications, career path discernment, and job placement.

Our facilities

Biophysics Instrumentation Core Facility offers sophisticated instrumentation dedicated to characterizing biomolecular conformations and interactions, as well as equipment for the isolation and purification of macromolecules for subsequent detailed biophysical analysis.
bic.nd.edu

Magnetic Resonance Research Center houses the following array of FT-NMR spectrometers: one 800 MHz, one 700 MHz, one 600 MHz, one 500 MHz, three 400 MHz, and one 300 MHz (solid-state). All of the spectrometers are multinuclear, and a large variety of probes are available.
nmr.nd.edu

Mass Spectrometry and Proteomics Facility provides instrumentation and expertise for the analyses of compounds ranging from small organic molecules to large biomolecules with applications in the areas of metabolomics, proteomics, and lipidomics
massspec.nd.edu

Materials Characterization Facility offers a diverse range of instrumentation, including FTIR and UV-Vis-NIR spectrometers, Raman microscopy, X-ray photoelectron spectrometry, and differential scanning calorimetry
mcf.nd.edu

Molecular Structure Facility houses three state-of-the-art X-ray diffractometers, which are used for routine low-temperature analysis of single crystal and powder samples. The facility is open to all of our graduate students, who have the opportunity to perform all aspects of their crystallography experiments.
xray.nd.edu

The Center for Research Computing provides exceptional levels of processing speed and power including parallel supercomputers, clusters, grid networks, and storage (18,000 cores total and 350TB storage).
crc.nd.edu

Genomics & Bioinformatics Core Facility can accommodate a range of sequencing and expression analyses. The facility operates three microarray platforms for analysis of transcripts from various tissue types and gDNA genotyping and comparative genome hybridization.
genomics.nd.edu

Integrated Imaging Facility provides an integrated suite of sophisticated microscopes and imaging stations that enable expert users to attack the most complex modern research problems and, equally important, resident professional staff, including technicians and research specialists, to guide the non-expert users.
imaging.nd.edu

STUDENT *VOICES*

Jonathan Morgan, Fourth year

When I studied biochemistry, I wanted to know more about the math and physics underlying the reactions. When I studied math, I found that I wanted to learn more about the biology of the systems we were modeling. I became interested in biophysics when I read about the program at Notre Dame. The program offered an opportunity to study at the intersection of where my interests lie, and there was a certain freedom to pursue this course of study that I had not seen elsewhere.

I chose the Biophysics program at the University of Notre Dame because of its emphasis on being a true interdisciplinary program. Since beginning my graduate studies here, I have taken classes and attended seminars across a variety of science departments including Chemistry, Math, and Physics. Being a part of a program like this has given me the ability to approach my research with a unique perspective and helped me become a well-rounded biophysicist.

Erin Brossard, Fourth year