

NANOBIOTECHNOLOGY

<http://inbt.jhu.edu>

The Johns Hopkins Institute for NanoBioTechnology (INBT) is a diverse, multidisciplinary team of faculty, researchers, and students uncovering new knowledge and creating innovative technologies at the interface of nanoscience, engineering, biology, and medicine. Launched in 2006, INBT aims to revolutionize research by fostering a collaborative environment among engineers, scientist, and clinicians to pioneer new ways to solve some of the most complex challenges in healthcare and the environment. The Institute brings together experts from the Bloomberg School of Public Health, School of Medicine, Whiting School of Engineering, Applied Physics Lab, and Krieger School of Arts and Sciences to fulfill their research, education, outreach, and translation initiatives.

The INBT has five research focused platforms: Cancer, Sensing, Aging, Genome Engineering, and Cell Programing. Examples of INBT research include the development of new tools and techniques to probe biological systems at the molecular, cellular, and tissue levels, to provide new insight into the mechanisms of disease, and the development of new diagnostic and therapeutic platforms for improved diagnosis, prevention, and treatment of disease. Their business office is located in 103 Shaffer Hall on the Homewood campus, with laboratory facilities and research teams located at several Johns Hopkins locations.

INBT's educational programs foster the next wave of innovators. Goals include training scientists and engineers who work between the physical sciences/engineering fields and life sciences/medical fields, as well as creating an entrepreneurial environment. The Nanotechnology for Cancer Research program trains students to study and model cancer motility and the biophysical forces involved in metastasis. Additionally, research opportunities exist through INBT's summer Research Experience for Undergraduates (REU) funded by the NSF, and the Master's Co-Op Education Program. The INBT also collaborates with major industry partners through its Corporate Partnership Program, to help move emerging technologies from laboratory to marketplace, as well as provide a vehicle for open exchange between Hopkins researchers and students with their counterparts in industry.

For current course information and registration go to <https://sis.jhu.edu/classes/>

Courses

EN.670.502. INBT Undergraduate Research. 1 - 3 Credits.

Student participation in ongoing research activities. Research is conducted under the supervision of a faculty member and often in conjunction with other members of the research group.

Prerequisite(s): Students must have completed Lab Safety training prior to registering for this class. To access the tutorial, login to myLearning and enter ASEN in the Search Box to access the proper course. Click here to access the Laboratory Safety Introductory Course (<https://johnshopkins.csod.com/ui/lms-learning-details/app/curriculum/66847e20-c695-4e54-a6be-8c94465b8a70/>); You must request Independent Academic Work using the Independent Academic Work form found in Student Self-Service: Registration, Online Forms.

EN.670.643. Nanotechnology for Cancer Research Tutorial. 1 Credit.

Students in the NTCR training grant program study and present topics in nanotechnology applied to biology from the scientific literature. For NTCR Fellows only.

Distribution Area: Engineering, Natural Sciences