The Institute for NanoBioTechnology (INBT) at Johns Hopkins University is an exceptionally diverse, multidisciplinary team of faculty, researchers, and students uncovering new knowledge and creating innovative technologies at the interface of nanoscience, engineering, and medicine. Launched in 2006, INBT aims to revolutionize research by fostering a collaborative environment among engineers, scientists, and clinicians to pioneer new ways to solve some of the 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. INBT 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. Their headquarters are located in 100 Croft Hall on the Homewood campus, with laboratory facilities and research teams located at several Johns Hopkins locations. 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. These are achieved through their three research focused platforms: Engineering for Cancer Therapies, Diagnostic Tools Engineered for Early Detection, and Stem Cells and Regenerative Engineering.

INBT education programs foster the next wave of nanobiotechnology innovations. 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) and International Research Experience for Students (IRES), both funded by NSF.

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. You must request Independent Academic Work using the Independent Academic Work form found in Student Self-Service: Registration, Online Forms.

**EN.670.600. Introduction to Co-Op Training. 1 Credit.**
This course offers the introduction to the cooperative (Co-Op) training program to the Masters of Science in Engineering (MSE) students. The Co-Op program provides MSE students career training while employed for six months where they gain work experience, network, and build technical and non-technical skills that prepares them for a competitive job market. Students receive a salary from the company while employed and college credit for completing the requirements. This course introduces to students the available Co-Op opportunities and prepares students with the academic and professional tools necessary to maximize their Co-Op experience. The course will be delivered in a hybrid format and will consist of case study sessions, mock interview preparation, presentation delivery development workshops, weekly lectures by the instructor team and guest speakers, and a final assessment.

**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