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## NSF Grant Adds Laboratory Component to Nanotechnology Concentration

By Jason L London

The National Science Foundation has awarded the College of Engineering a major grant that will develop a hands-on research component in the College's new undergraduate concentration in nanotechnology. Beginning in 2010, the grant, "NUE: Undergraduate Laboratory Experiences in Nanotechnology Devices and Systems (U-LENS)," will implement lab modules in two undergraduate nanotechnology courses, "Nanophotonics Devices Laboratory" and "Nanometer-Scale Processes in Living Systems."

"This will really allow students to flesh out what they are learning in theory from the classroom," said Associate Professor Anna Swan (ECE). "The lab aspect will get students in the lab – adding a hands-on component to their coursework."

The grant's lab modules will strengthen the experiential learning for undergraduates in the concentration, and will serve as a gateway for interaction between faculty involved in nanotechnology research and companies in nanotechnology areas.

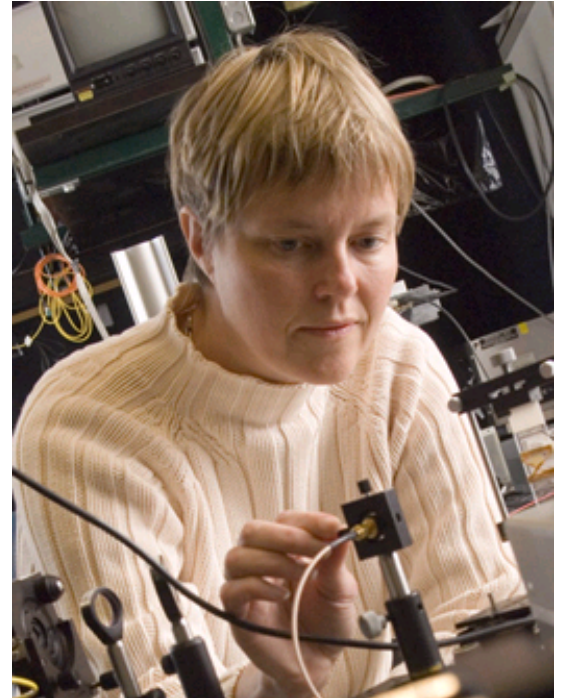
"We have already received commitments from start-up companies to utilize our students as summer researchers," Swan said. "The lab work will make students feel more comfortable in a research setting and provide a portal for entering into research. The students will present posters of their work at a Photonics Café where they will mingle with faculty, graduate students and start-up companies."

The grant will also fund the purchase of new laboratory equipment and enable the development of several new freshmen engineering modules on nanotechnology, which will be available to all College undergraduates.

Swan is one of five co-principal investigators, alongside assistant professors Hatice Altug (ECE), Sean Andersson (ME), Tyrone Porter (ME) and Michael Smith (BME). The grant also includes participating faculty from throughout the College of Engineering, as well as Boston University's departments of Physics and Chemistry, and the Center for Nanoscience and Nanobiotechnology (CNN).

"The new nanotechnology concentration, along with the NSF grant, fits perfectly with the general research mission of Boston University," Swan said, "Lab work can inspire students, and it's great that we'll be able to capture students in this way. It will bring visibility to nanotechnology at Boston University."

The NSF grant strengthens the College's new [concentration in nanotechnology](#), which provides undergraduate students with foundational knowledge of nanotechnology and helps position them for future careers in the nanotechnology field.



*Associate Professor Anna Swan (ECE)*