

Nanobiosystems Senior Project

Senior Design Project: Development of nano-scale devices and systems for interfacing with biology.

Project Description:

This is a research project in which students will be exposed to the rapidly developing field of nanotechnology. Students will be responsible for the design, fabrication, and testing of nano-scale devices and systems to interface with biology. Examples include nanobiosensors, nanofluidics, self-assembled structures, and more. Since this is a research project, student input will have a direct impact on the direction of the project.

Big picture:

This project is part of a larger research effort to develop fully integrated systems involving nano-scale devices and biological materials. Once these nanobiosystems have been developed, researchers will have unprecedented tools for probing biological materials, leading to breakthroughs in medicine.

Benefits to undergraduate students:

- Participate in cutting edge research project
- Hands-on experience in fabricating nano-scale devices
- Multidisciplinary approach provides exposure to biology and medicine
- Create a tangible and useful product
- Opportunity to move to into career in research
- Possible publications (conference, journal, etc.)

Requirements:

- ☺ 2-3 highly motivated undergraduate students as a team
- ☺ A strong desire to do something meaningful during your senior design project
- ☺ 10 hrs/week averaged over 3 quarters

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