

NEW COURSE IN WINTER 2025

BIOC-8008 Special Topics in Biochemistry Nanobiosensors

Instructor: Scott G. Harroun

This course explores nanoscale biosensors and their use in biomedical diagnostics and environmental monitoring. Students will learn how components such as programmable DNA sequences, antibodies and other proteins, gold and silver nanoparticles, and quantum dots are engineered to create advanced sensing platforms. Key applications include biomedical imaging, spectroscopy, electrochemical sensors and stimuli-responsive systems. The course integrates chemistry, biology and physics with an emphasis on applications, equipping students with a foundation to design cutting-edge nanobiosensors.

Open to PhD, MSc, MMB and MMCE students