BIOMEDICAL ENGINEERING
COLLEGE OF ENGINEERING AND APPLIED SCIENCE

SUMMER RESEARCH OPPORTUNITIES FOR UNDERGRADUATE students

FOR APPLICATION YEAR: 2026

PROJECT TITLE: **Wearable molecular monitors spanning wellness to disease management**

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Project Description

Chronic disease management is healthcare’s biggest challenge. Patients with chronic diseases and their doctors deserve the same breakthrough in care that diabetics obtain from continuous glucose monitors (CGMs). We are developing CGM+ , which for the first time will enable real-time diagnostics for chronic disease indicators beyond glucose.
Specifically, in this project students will work with Ph.D. students and Prof. Heikenfeld in developing sensors for cardiac patient applications, and for a wider-variety of applications where molecular biomarkers can inform general wellness or improved management of patients during daily life. The work involves wet-chemistry, where gold electrodes are coated with a specialized layer of DNA molecules that capture and allow an electronic measure of concentrations of biomarkers in the body.
Students will be trained in everything they may need for the project and receive personalized mentorship matching their long-term professional goals.