

CARNEGIE MELLON UNIVERSITY

BME 2025 SPRING SEMINAR SERIES

Design for Impact: Developing and Teaching Engineering Courses about Women's Health Medical Device Design and Numerical Methods



PRESENTED BY

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SCHEDULE

Doherty Hall (DH) 2315

**Tuesday,
March 18, 2025
(11:00-12:00 PM)**

In this seminar, I will share my experience developing and teaching two engineering courses: a Women's Health Medical Device seminar and a Numerical Methods class. The Women's Health Medical Device class was geared toward first-year undergraduates across all disciplines in engineering and designed to address the unique challenges in medical innovation for women's health, providing students with hands-on experience in the product design cycle, specifically focusing on clinical considerations, device design, and rapid prototyping with additive manufacturing. The Numerical Methods class was directed toward mechanical engineering upperclassmen and focused on equipping students with essential techniques for solving complex engineering systems using iterative approximations, optimization methods, and statistical regression modeling. Through this talk, I will discuss the pedagogical strategies I employed to engage students in both courses, the process of curriculum development, and the integration of real-world applications into the classroom.