Graduate Certificate in Medical Product Innovation

In conjunction with the University of Pittsburgh Center for Medical Innovation (CMI), the Department of Bioengineering offers a special Graduate Certificate in Medical Product Innovation (C-MPI).

The C-MPI is a multi-faceted program, reflecting the multidisciplinary nature of medical innovation.

The C-MPI program is coherently designed to assure mastery of specific knowledge and skills, rather than a random accumulation of a specified number of courses.

C-MPI OBJECTIVES

■ To educate engineering graduate students at the MSc and PhD levels in clinical, engineering, business, and legal aspects of the medical device design and development process;

■ To educate students of the health sciences (residents, fellows and clinicians) in engineering, business, and legal methodologies in identifying and developing innovative solutions to their problems;

■ To educate law students in engineering methodology, regulatory constraints, medical device intellectual property, and commercialization aspects of medical innovation;

■ To educate business (MBA) students in clinical, engineering, regulatory, and legal aspects of medical innovation and entrepreneurship; and

■ To train all of the above disciplines in the art of working in multi-disciplinary teams to accomplish the medical innovation process, from medical technology ideation, through development, to realization and commercialization.

ENROLLMENT

Students currently enrolled in any graduate program in the University (MSc, MBA, JD, PhD, etc.) are eligible to obtain the C-MPI upon completion of the Certificate requirements. No formal admissions process is required for students who are currently enrolled in any type of graduate program in the University.

The distinctive educational core of the Medical Product Innovation track for the Graduate Certificate in Bioengineering is two courses.

NOTE: Students accepted in the program must comply with all Swanson School of Engineering (SSoE) requirements for access to clinical sites within the UPMC system.

In addition to the two Core Classes (6 credits), the Medical Product Innovation program requires an additional 9 credits (Medical Ethics - 3 credits, Entrepreneurship/Engineering Management - 3 credits, Legal Aspects of Medical Product Engineering - 3 credits) for a total of 15 credits.

Details of this program can be found at engineering.pitt.edu/cmi
A new interdisciplinary program within the University of Pittsburgh, whose purpose is to stimulate, guide, and promote the development and commercialization of technological innovations to improve health care. CMI provides an organizational structure that links faculty, students, and clinicians across the University of Pittsburgh through collaboration with the Swanson School of Engineering, Schools of the Health Sciences, the Katz School of Business, the School of Law, the Office of Technology Management, and the Wallace H. Coulter Foundation Translational Research Partnership II.

CMI MISSION

The mission of CMI has three essential components:

- **Research:** To provide an organizational structure to link engineering faculty, clinicians, and students at the University of Pittsburgh, and to fund early-stage development of innovative biomedical technologies.

- **Education:** To educate the next generation of innovators in the design, development, and commercialization of medical technologies through classroom and hands-on experiences in cooperation with the schools of Engineering, Health Sciences, Business, and Law.

- **Development:** To facilitate the translation of innovative biomedical technologies into marketable products, services, and business ventures in collaboration with the University of Pittsburgh Office of Technology Management and the Coulter Translational Research Partnership.

Educational Program

CMI will offer, through the Swanson School’s Department of Bioengineering, two options for a Professional Master of Science degree (Medical Product Engineering track), and a new Graduate Certificate in Medical Product Innovation. Additionally, engineering graduate students may participate in courses and innovation projects as part of their dissertation work. Medical students will be able to satisfy School of Medicine research requirements through participation in CMI sponsored projects. Courses in innovation and entrepreneurship already offered through the Swanson School of Engineering, the Katz School of Business, and the School of Law will be available to all students interested in medical innovation. Multi-disciplinary student teams (including graduate students in engineering and business, as well as law and medicine) will work with engineering faculty, clinicians, and industry advisors to develop innovative medical technologies through the prototype stage.

“You can never solve a problem with the same kind of thinking that created the problem in the first place.”

— Albert Einstein