



“During these difficult times, it is important to remember the role of an engineer – to innovate and find solutions for unmet needs in the real world and provide advancements that will impact lives across the globe.”

– Sanjeev G. Shroff, PhD
Distinguished Professor of and
McGinnis Chair in Bioengineering

Professional Master of Science in Bioengineering **Medical Product Engineering (MS-MPE)**

Application Deadlines: Domestic July 1 – International April 1

WHY STUDY MPE AT THE UNIVERSITY OF PITTSBURGH?

Pitt’s professional **MS in Bioengineering – Medical Product Engineering (MS-MPE)**, applies engineering innovation to the identification of and solution to challenges in health care delivery in the medical industry. Students have the opportunity to work with the renowned University of Pittsburgh Medical Center in a city that has been named a U.S. tech hub to watch.

The program is offered by Pitt’s nationally ranked Department of Bioengineering in conjunction with the University of Pittsburgh Center for Medical Innovation (CMI). We offer hands-on, practical experience in medical product design and development that will prepare you for an industrial or academic career in the medical product engineering sector.

The 30-credit MS-MPE program leads student teams through all the steps to developing new products for the clinical marketplace. Through lectures, industry workshops, and real-world projects guided by highly-supportive clinical mentors, our students learn to apply methods of problem discovery and structured ideation to develop innovative solutions.

Upon graduation, 77 percent of our students enter industry careers with the remainder going to further graduate work, medical school, and other related fields. **Within six months of graduation, 95 percent of the MS-MPE students wishing to join industry found employment at a mean starting annual salary of \$85,000.**

TRANSLATIONAL RESEARCH PROGRAMS IN THE SWANSON SCHOOL

The Center for Medical Innovation (CMI) is part of the innovation ecosystem which supports the commercial translation of new university-based medical technologies. Since its inception in 2012, the CMI has invested over \$1.4M in 73 projects to develop novel medical technologies. The CMI works closely with the MS in Bioengineering – MPE program to provide career-building opportunities for the next generation of innovators, managers, and developers.

In collaboration with Pitt’s Innovation Institute, the Coulter Program is an on-campus biomedical accelerator housed in the Department of Bioengineering. They provide support to researchers interested in the commercial translation of their biomedical innovations.

The COVID-19 pandemic has engendered a wave of new and adaptive technologies to address the need for personal protective equipment (PPE), ventilators and other innovations – some of which were developed here at the University of Pittsburgh and the Swanson School of Engineering.

A postsecondary degree can help protect against unemployment during times of economic downturn. Become a competitive candidate in the job market by boosting your resume with an **MS in Bioengineering – Medical Product Engineering**.

ADMISSIONS REQUIREMENTS

A Bachelor of Science degree in a STEM discipline.

Deadline for Fall 2022 admissions July 1.

FOR MORE INFORMATION AND TO APPLY

engineering.pitt.edu/graduate

PITT | **SWANSON**
ENGINEERING
GRADUATE & ONLINE PROGRAMS

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Professional Master of Science in Bioengineering Medical Product Engineering (MS-MPE)

Required for professional MS-MPE (30 credits)

- Four courses in Medical Product Engineering/Innovation (12 credits)
- Medical Ethics (3 credits)
- Graduate Engineering Mathematics or Statistics (3 credits)
- Graduate Engineering/Science Electives (12 credits)

Full-time students are recommended to complete a part-time internship (paid, unpaid, or for credit) with an industry partner or related entity.

The 30-credit MS-MPE program can be completed in 12-16 months as a full-time student, depending on participation in an internship.

Dual Degree – MBA/MS-MPE

Take your MS-MPE degree to the next level through Pitt's **Dual MBA/MS-Engineering Joint-Degree Program** offered by the Joseph M. Katz Graduate School of Business and the Swanson School of Engineering. Contact persons listed to the right or visit business.pitt.edu/mba/joint-and-dual-degree-mba/mba-and-master-of-science-in-engineering for more information about this program's application requirements.

Graduate Certificate in Medical Product Innovation (C-MPI)

For those seeking a shorter alternative to the MS-MPE program, we offer a 15-credit Graduate Certificate in Medical Product Innovation (C-MPI) program. Anyone who holds at least a 4-year baccalaureate degree is eligible to apply. This is a great option for working professionals in the healthcare industry looking to enrich their career.

Required for Graduate Certificate in Medical Product Innovation (15 credits)

- Two courses in Medical Product Innovation (6 credits)
- Medical Ethics (3 credits)
- Entrepreneurship/Engineering Management (3 credits)
- Legal Aspects of Medical Product Innovation (3 credits)

DELIVERY	TOTAL CREDITS	ENTRANCE EXAM	ADDITIONAL ADMISSIONS REQUIREMENTS
<ul style="list-style-type: none"> • On-Campus 	<ul style="list-style-type: none"> • MS-MPE – 30 • C-MPI – 15 	<ul style="list-style-type: none"> • GRE (<i>optional for Fall 2022 admissions</i>) • TOEFL, IELTS or Duolingo scores (<i>required for international students</i>) 	<ul style="list-style-type: none"> • Minimum two letters of recommendation • College transcripts

For more information, please contact:

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University of Pittsburgh

Swanson School of Engineering
Department of Bioengineering
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Pittsburgh, PA 15261



engineering.pitt.edu/bioengineering

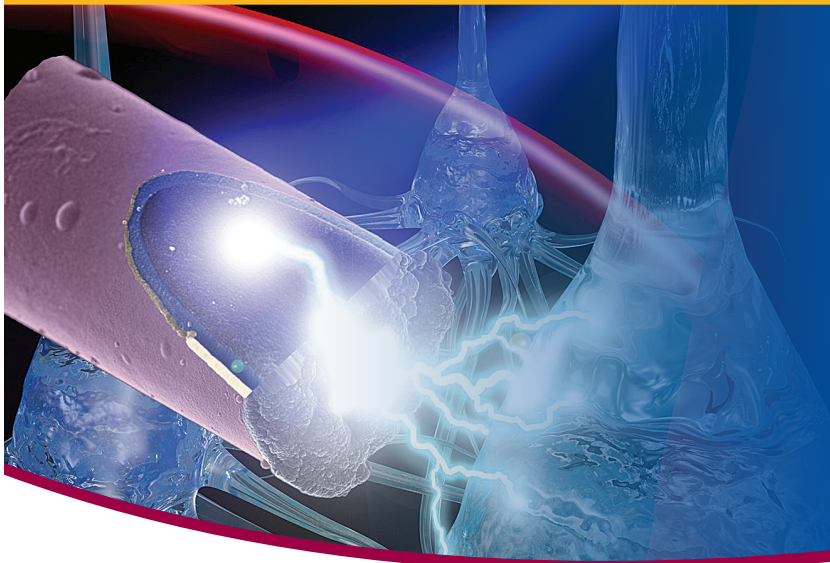


UNIVERSITY OF PITTSBURGH
CENTER FOR MEDICAL
INNOVATION

engineering.pitt.edu/cmi

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09/21



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Professional Master of Science in Bioengineering Neural Engineering Focus

WHY STUDY NEURAL ENGINEERING AT THE UNIVERSITY OF PITTSBURGH?

Pitt is a recognized leader in the emerging discipline of Neural Engineering. Our core faculty and clinical collaborators offer courses that prepare students to work in this exciting and dynamic field. Neural Engineering, encompassing areas such as neural prosthetics, brain-computer interface systems, epilepsy monitoring, deep brain stimulation, engineering approaches to psychiatric disorders, and brain-inspired computation and device design, is a fast-growing field that provides clinical and technological benefits.

The program is offered by Pitt’s nationally ranked Department of Bioengineering. Instruction will be in-person and online. The 30-credit program can be completed in one year of full-time study. Students will garner a deep knowledge of the biology of the nervous system, and how, from an engineering perspective, to treat disorders, build clinical devices, and build computational models. The non-thesis program is designed to provide excellent training for industry in Neural Engineering or related fields such as Medical Devices or Data Science.

CONCENTRATIONS

Neural engineering students will pursue didactic coursework that builds core competency in at least two of the following areas:

- Brain-computer interfaces
- Neural tissue interface
- Neural imaging and signals
- Neural devices and neuromorphic engineering

The concentrations for core competency will be selected in consultation with the program director and will take into consideration the student’s previous training and career aspirations.

REQUIREMENTS FOR PROFESSIONAL MS (30 credits, typically 10 courses)

- 12 credits in Concentration 1
- 3 credits in Life Sciences
- 3 credits in Mathematics/Statistics
- 9 credits in Concentration 2
- 3 credits in Medical Ethics

DELIVERY	ENTRANCE EXAM	ADDITIONAL ADMISSIONS REQUIREMENTS
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A postsecondary degree provides excellent preparation for a fast-growing industry position in Neural Engineering, or it can help you to prepare for a PhD.

ADMISSIONS REQUIREMENTS

A Bachelor of Science degree in a STEM discipline. The application process is competitive.

FOR MORE INFORMATION AND TO APPLY

engineering.pitt.edu/graduate

For more information, please contact:

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STEPHANIE OPALINSKI, MBA

Senior Manager of Graduate Engineering

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