BIOENGINEERING: BIOINSTRUMENTATION, MENG

for the degree of Master of Engineering in Bioengineering, Bioinstrumentation Concentration

The MEng in Bioengineering is a professionally-oriented degree designed to bridge the skills gap by developing students with advanced technical know-how, a better understanding of the medical healthcare industry and more business acumen through coursework and project work, which provides students exposure to real world industry issues. Other concentrations under the MEng in Bioengineering major include General Bioengineering (http://catalog.illinois.edu/graduate/engineering/bioengineering-meng/general-bioengineering/).

Department Research

Bioengineering faculty perform research in the areas of Bio-Imaging at Multi-Scale; Molecular, Cellular and Tissue Engineering; Bio-Micro and Nanotechnology; Computational and Systems Bioengineering; and Synthetic Bioengineering. MEng students are able to do independent study research projects with Bioengineering faculty and affiliate faculty (https://bioengineering.illinois.edu/directory/) for class credit.

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For additional details and requirements for all degrees, please refer to the department's Graduate Studies website (https://bioengineering.illinois.edu/academics/graduate/) and the Graduate College Handbook (http://grad.illinois.edu/gradhandbook/).

Code	Title	Hours
Core Courses		**16**
BIOE 570	Seminar Series (two semesters)	
BIOE 573	Managing Business Operations	
BIOE 574	Innovation and Introduction to Financial Decision Making	
BIOE 575	Capstone Project (two semesters)	
Concentration Courses		**8**
BIOE 571	Biological Measurement I	
BIOE 572	Biological Measurement II	
Concentration Electives		**8**
400- or 500-level courses selected in consultation with advisor		
Total Hours		**32**

Other Requirements

Code	Title	Hours
Minimum 500-level hours required overall:		12
Minimum GPA:		3.0
Minimum credit hours taken from the University of Illinois at Urbana-Champaign campus:		20

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By the end of the program, students will be able to:

1. Apply quantitative skills and engineering principles to propose novel and practical solutions to medical/human health problems.
2. Foster collaboration with a diverse team.
3. Demonstrate a basic understanding of business operations, financial decision-making, intellectual property, and regulatory matters.
4. Employ the highest standards of academic, professional, and ethical responsibility from conscientious design to research and development processes and ethical decision-making processes.
5. Effectively communicate (both orally and in writing) real-world scientific problems with a bigger vision and offer solutions, as well as their impact, to a diverse audience and stakeholders.
6. Demonstrate mastery of the design process including defining the problem and implementing the solutions, while taking into consideration the needs of the user demographic at the core of concept development.
7. Explore factors of innovation and commercialization possibilities of solutions.
8. Develop practical client and project management skills, as well as effective leadership and other professional skills.

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Admission Requirements

Students must select one of the concentrations under the MEng in Bioengineering program to apply to and will not be able to complete multiple concentrations. Students should have an undergraduate degree in an engineering or a science related field or must have taken engineering or science related coursework. Applicants should have a minimum grade point average of 3.00 (A = 4.00) or equivalent for the last two years of undergraduate study and show evidence of strong quantitative skills and of serious interest in the life sciences through their personal statement. Students with less than a 3.0 GPA may be considered for a limited status admission. Students in the program do not have automatic admission to the PhD program in any engineering department.

All applicants whose native language is not English are required to submit TOEFL (http://www.toefl.org/) or International English Language Testing System (IELTS) (http://www.ielts.org/) scores as evidence of English proficiency. Minimum admission requirements (https://grad.illinois.edu/admissions/instructions/04c/) for English proficiency are set by the Graduate College. Students applying to the online program must satisfy the full status admissions requirement.

Applicants may be exempt from the TOEFL if certain criteria (http://grad.illinois.edu/admissions/instructions/04c/)are met. Applicants with lesser scores may still apply. Limited status (http://grad.illinois.edu/admissions/instructions/04c/) is granted for lesser scores and requires enrollment in English as a Second Language (ESL) courses (https://linguistics.illinois.edu/languages/english-second-language/) based on an ESL Placement Test (EPT) taken upon arrival to campus.

For additional application information, view our Application Information here (https://bioengineering.illinois.edu/admissions/graduate/meng/).

Financial Aid

For tuition information and external funding resources, please visit the program's tuition and fees website (https://registrar.illinois.edu/tuition-fees/tuition-fee-rates/), specifically the tuition for "MENG Bioengineering". Students in the MEng in Bioengineering program are not eligible for Board of Trustees (BOT) tuition-waiver generating assistantships at the University of Illinois Urbana-Champaign.

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Department of Bioengineering

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Director of MEng Program: Jennifer Amos (Jamos@illinois.edu)
Bioengineering Department website (https://bioengineering.illinois.edu/)
Program website (https://bioengineering.illinois.edu/academics/graduate/meng/)
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(217) 300-8066

Grainger College of Engineering

Grainger College of Engineering website (https://grainger.illinois.edu/)

Admissions

Graduate Programs Contact: bioe-meng@illinois.edu
Master of Engineering in Bioengineering Admissions & Requirements (https://bioengineering.illinois.edu/admissions/graduate/meng/)
Graduate College Admissions & Requirements (https://grad.illinois.edu/admissions/apply/)