

# BIOENGINEERING: GENERAL BIOENGINEERING, MENG

for the degree of Master of Engineering in Bioengineering, General Bioengineering 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 Bioinstrumentation (<http://catalog.illinois.edu/graduate/engineering/bioengineering-meng/bioinstrumentation/>) and Computational Genomics (<http://catalog.illinois.edu/graduate/engineering/bioengineering-meng/computational-genomics/>).

## 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.

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

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

Code	Title	Hours
Core Concentration		18
Technical Coursework from approved list		
Business Coursework from approved list		
Elective Courses chosen in consultation with advisor		8
Professional Development from approved list		6
<b>Total Hours</b>		<b>32</b>

## 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
Maximum number of previous University of Illinois at Urbana-Champaign graduate-level coursework not applied to any other degree that may be transferred and applied to the major pending department and Graduate College approval		12

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

## 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/>) are set by the Graduate College. Students applying to the online program must satisfy the full status admissions requirement.

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org/>) score of 103 (iBT), 257 (CBT), or 613 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org/>) academic exam scores of 7.0 overall and 6.0 in all subsections for full admission into the program. 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 (<http://linguistics.illinois.edu/students/esl/guidelines/>) based on an ESL Placement Test (EPT) taken upon arrival to campus.

### Financial Aid

For tuition information and external funding resources, please visit the program's tuition and fees Web site (<https://bioemeng.illinois.edu/tuition-fees/>). Students in the MEng in Bioengineering program are not eligible for Board of Trustees (BOT) tuition-waiver generating assistantships at the University of Illinois.

*for the degree of Master of Engineering in Bioengineering, General Bioengineering Concentration*

## Graduate Programs in Bioengineering

- Majors
  - Bioengineering, MEng (<http://catalog.illinois.edu/graduate/engineering/bioengineering-meng/>)
    - concentrations
      - Bioinstrumentation (<http://catalog.illinois.edu/graduate/engineering/bioengineering-meng/bioinstrumentation/>)
      - Computational Genomics (<http://catalog.illinois.edu/graduate/engineering/bioengineering-meng/computational-genomics/>)
      - General Bioengineering (p. 1)
    - Bioengineering, MS (<http://catalog.illinois.edu/graduate/engineering/bioengineering-ms/>)
      - optional concentrations
        - Biomechanics (<http://catalog.illinois.edu/graduate/engineering/concentration/biomechanics/>)
        - Cancer Nanotechnology (<http://catalog.illinois.edu/graduate/engineering/concentration/cancer-nanotechnology/>)
    - Bioengineering, PhD (<http://catalog.illinois.edu/graduate/engineering/bioengineering-phd/>)
      - optional concentrations
        - Biomechanics (<http://catalog.illinois.edu/graduate/engineering/concentration/biomechanics/>)
        - Cancer Nanotechnology (<http://catalog.illinois.edu/graduate/engineering/concentration/cancer-nanotechnology/>)
        - Computational Science and Engineering (<http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/>)
    - Biomedical Image Computing, MS (<http://catalog.illinois.edu/graduate/engineering/biomedical-image-computing-ms/>)
- Concentrations
  - Bioinstrumentation (<http://catalog.illinois.edu/graduate/engineering/bioengineering-meng/bioinstrumentation/>)
    - available for:
      - Bioengineering, MEng (<http://catalog.illinois.edu/graduate/engineering/bioengineering-meng/>)
  - Biomechanics (<http://catalog.illinois.edu/graduate/engineering/concentration/biomechanics/>)
    - available for:
      - Electrical & Computer Engineering, MS (<http://catalog.illinois.edu/graduate/engineering/electrical-computer-engineering-ms/>)
      - Electrical & Computer Engineering, PhD (<http://catalog.illinois.edu/graduate/engineering/electrical-computer-engineering-phd/>)
      - Materials Engineering, MEng (<http://catalog.illinois.edu/graduate/engineering/materials-science-engineering-ms/>)
      - Materials Science & Engineering, MS (<http://catalog.illinois.edu/graduate/engineering/materials-science-engineering-ms/>)
      - Materials Science & Engineering, PhD (<http://catalog.illinois.edu/graduate/engineering/materials-science-engineering-phd/>)
      - Mechanical Engineering, MS (<http://catalog.illinois.edu/graduate/engineering/mechanical-engineering-ms/>)
      - Mechanical Engineering, MEng (<http://catalog.illinois.edu/graduate/engineering/mechanical-engineering-meng/>)
      - Mechanical Engineering, PhD (<http://catalog.illinois.edu/graduate/engineering/mechanical-engineering-phd/>)
      - Computational Science and Engineering (<http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/>)
      - Theoretical & Applied Mechanics, MS (<http://catalog.illinois.edu/graduate/engineering/theoretical-applied-mechanics-ms/>)
      - Theoretical & Applied Mechanics, PhD (<http://catalog.illinois.edu/graduate/engineering/theoretical-applied-mechanics-phd/>)
  - Cancer Nanotechnology (<http://catalog.illinois.edu/graduate/engineering/concentration/cancer-nanotechnology/>)
    - available for:
      - Electrical & Computer Engineering, MS (<http://catalog.illinois.edu/graduate/engineering/electrical-computer-engineering-ms/>)
      - Electrical & Computer Engineering, PhD (<http://catalog.illinois.edu/graduate/engineering/electrical-computer-engineering-phd/>)
      - Materials Engineering, MEng (<http://catalog.illinois.edu/graduate/engineering/materials-science-engineering-ms/>)
      - Materials Science & Engineering, MS (<http://catalog.illinois.edu/graduate/engineering/materials-science-engineering-ms/>)
      - Materials Science & Engineering, PhD (<http://catalog.illinois.edu/graduate/engineering/materials-science-engineering-phd/>)
      - Mechanical Engineering, MS (<http://catalog.illinois.edu/graduate/engineering/mechanical-engineering-ms/>)
      - Mechanical Engineering, MEng (<http://catalog.illinois.edu/graduate/engineering/mechanical-engineering-meng/>)

- Mechanical Engineering, PhD (<http://catalog.illinois.edu/graduate/engineering/mechanical-engineering-phd/>)
- Theoretical & Applied Mechanics, MS (<http://catalog.illinois.edu/graduate/engineering/theoretical-applied-mechanics-ms/>)
- Theoretical & Applied Mechanics, PhD (<http://catalog.illinois.edu/graduate/engineering/theoretical-applied-mechanics-phd/>)

The Department of Bioengineering offers studies leading to the Master of Engineering in Bioengineering (MEng), the Master of Science in Bioengineering (MS), the Master of Science in Biomedical Image Computing (MS in BIC), and the Doctor of Philosophy (PhD) in Bioengineering. The Bioengineering Graduate Program provides students with educational and research experiences that integrate the sciences of biology and medicine with the practices and principles of engineering. For the MS and PhD programs, areas of focus include Bio-imaging, Cell & Tissue Engineering, Micro and Molecular Technologies, and Computational Biology.

*for the degree of Master of Engineering in Bioengineering, General Bioengineering Concentration*

### **Bioengineering**

Department Head: Mark Anastasio ([maa@illinois.edu](mailto:maa@illinois.edu))

Director of Graduate Studies: Wawrzyniec Dobrucki ([dobrucki@illinois.edu](mailto:dobrucki@illinois.edu))

Bioengineering website (<https://bioengineering.illinois.edu>)

### **Bioengineering MEng Program**

Director of MEng Program: Jennifer Amos ([Jamos@illinois.edu](mailto:Jamos@illinois.edu))

Contact: Liezl Bowman

Bioengineering MEng Program website (<https://bioemeng.illinois.edu>)

1240 Everitt Laboratory, 1406 W Green St, Urbana, IL 61801

(217) 300-8066

Bioengineering MEng email ([bioe-meng@illinois.edu](mailto:bioe-meng@illinois.edu))

### **Grainger College of Engineering**

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

### **Admissions**

MEng Bioengineering Admissions (<https://bioemeng.illinois.edu/admissions/>)

Graduate College Admissions & Requirements (<https://grad.illinois.edu/admissions/apply/>)