

BIOENGINEERING, PHD

<http://bioengineering.illinois.edu>

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Major: Bioengineering
 Degrees Offered: M.Eng., M.S., Ph.D.

Graduate Concentrations: Biomechanics, Cancer Nanotechnology

Graduate Degree Programs

The Department of Bioengineering offers studies leading to the Master of Engineering in Bioengineering (M.Eng.), the Master of Science in Bioengineering (M.S.), and the Doctor of Philosophy (Ph.D.) 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 M.S. and Ph.D. programs, areas of focus include Bio-imaging, Cell & Tissue Engineering, Micro and Molecular Technologies, and Computational Biology. Opportunity also exists for specializing in (1) computational science and engineering and (2) energy and sustainability engineering via the Computational Science and Engineering (CSE) transcriptable concentration and the Energy and Sustainability Engineering (EaSE) Option (<http://ease.illinois.edu>).

Admission

For the M.S. and Ph.D. programs, applicants should have an undergraduate or graduate degree, respectively, in a natural science, computer science, or engineering. A minimum grade point average of 3.00 (A = 4.00) for the last two years of undergraduate study is required. Applicants should show evidence of strong quantitative skills and of serious interest in the life sciences. All applicants must submit results from the Graduate Record Examination (GRE) (<http://www.ets.org>) general test.

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 97 (iBT), 243 (CBT), or 590 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 6.5 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. For those taking the TOEFL or IELTS, full admission status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for scores of 103 (TOEFL iBT) or greater, 253 (TOEFL CBT), 610 (TOEFL PBT), or 6.5 (IELTS). 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.

Please see the admission requirements for the M.Eng. in Bioengineering under the "Masters" tab.

Degree Requirements

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

Faculty Research Interests

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. In addition to Bioengineering faculty (<http://bioengineering.illinois.edu/directory>), Department of Bioengineering has more than 50 affiliate faculty (<http://bioengineering.illinois.edu/directory>).

Financial Aid

For the M.S. and Ph.D. programs, qualified students may apply for financial aid in the form of fellowships, teaching and research assistantships, and waivers of tuition and service fees. All applicants, regardless of U.S. citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (<http://grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. For students who are unable to take the iBT or IELTS, a minimum score of 4CP is required on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (http://cte.illinois.edu/programs/ta_train.html) conducted prior to the start of the semester.

Please see the financial aid eligibility for the M.Eng. in Bioengineering under the "Masters" tab.

- Master of Science in Bioengineering (<http://catalog.illinois.edu/graduate/graduate-majors/bio-engin/ms-bioengineering>)
- Master of Engineering in Bioengineering (<http://catalog.illinois.edu/graduate/graduate-majors/bio-engin/meng-bioengin>)

Entering with approved M.S. degree

Code	Title	Hours
BIOE 599	Thesis Research (min-max applied toward degree)	52
Elective courses		12
Total Hours		64

Other Requirements and Conditions¹

Other Requirements and Conditions may overlap

Minimum program GPA:	3.0
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A Masters degree is required for admission to the Ph.D. program.

Qualifying exam ²

Preliminary exam

Final exam and dissertation defense

Dissertation deposit

¹ For additional details and requirements for all degrees, please refer to the department's Graduate Studies Web site (<http://bioengineering.illinois.edu>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Examination information (<http://bioengineering.illinois.edu/graduate-programs/current-graduate-students/qualifying-exam>)

Entering with B.S. degree

Code	Title	Hours
BIOE 599	Thesis Research (min-max applied toward degree)	55
500-level BioE courses: See approved list		21
Elective courses: At least 12 hours must be engineering graduate-level courses. See website for more details.		20
Total hours		96

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Minimum program GPA: 3.0

Qualifying exam ²

Preliminary exam

Final exam and dissertation defense

Dissertation deposit

¹ For additional details and requirements for all degrees, please refer to the department's Graduate Studies Web site (<http://bioengineering.illinois.edu>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Examination information (<http://bioengineering.illinois.edu/graduate-programs/current-graduate-students/qualifying-exam>)

- Graduate Concentration in Biomechanics (<http://catalog.illinois.edu/graduate/graduate-majors/bio-engin/conc-biomechanics>)
- Master of Science in Bioinformatics, Bioengineering Concentration (<http://catalog.illinois.edu/graduate/graduate-majors/bio-engin/ms-bioinfo-conc-bioeng>)
- Graduate Concentration in Cancer Nanotechnology (<http://catalog.illinois.edu/graduate/graduate-majors/bio-engin/grad-conc-cancer-nanotechnology>)