

BIOMECHANICS GRADUATE CONCENTRATION

For the graduate concentration in Biomechanics

The Biomechanics Concentration prepares students for collaborative research across the disciplines of engineering, biology, and the sciences. Students must be enrolled in a graduate degree program:

Bioengineering, MS (<http://catalog.illinois.edu/graduate/engineering/bioengineering-ms/>)|Bioengineering, PhD (<http://catalog.illinois.edu/graduate/engineering/bioengineering-phd/>)|Bioinformatics: Bioengineering, MS (<http://catalog.illinois.edu/graduate/engineering/concentration/bioengineering/bioinformatics/>)|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-engineering-meng/>)|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/>)

Other Graduate Programs in the Department of Bioengineering

degrees:

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 (<http://catalog.illinois.edu/graduate/engineering/bioengineering-meng/general-bioengineering/>)

Bioengineering, MS (<http://catalog.illinois.edu/graduate/engineering/bioengineering-ms/>)

optional concentrations:

Biomechanics (p. 1)|Cancer Nanotechnology (<http://catalog.illinois.edu/graduate/engineering/concentration/cancer-nanotechnology/>)

Bioengineering, PhD (<http://catalog.illinois.edu/graduate/engineering/bioengineering-phd/>)

optional concentrations:

Biomechanics (p. 1)|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/>)

concentrations:

Cancer Nanotechnology (<http://catalog.illinois.edu/graduate/engineering/concentration/cancer-nanotechnology/>)

available for:

Bioengineering, MS (<http://catalog.illinois.edu/graduate/engineering/bioengineering-ms/>)|Bioengineering, PhD (<http://catalog.illinois.edu/graduate/engineering/bioengineering-phd/>)|Bioinformatics: Bioengineering, MS (<http://catalog.illinois.edu/graduate/engineering/concentration/bioengineering/bioinformatics/>)|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-engineering-meng/>)|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 Biomechanics Graduate Concentration

The Biomechanics Concentration requires students to earn a B or better in each concentration course and complete at least 12 hours. Fulfillment of these requirements will be monitored jointly by the graduate coordinators in Bioengineering and in Mechanical Science and Engineering.

Code	Title	Hours
Current course options include:		
ABE 446	Biological Nanoengineering	
BIOE 482	Musculoskel Tissue Mechanics	
ME 483	Mechanobiology	
MSE 474	Biomaterials and Nanomedicine	
PHYS 550	Biomolecular Physics	
TAM 461	Cellular Biomechanics	
Alternate courses may be applicable to the Biomechanics Concentration pending joint approval by the Bioengineering and Mechanical Science and Engineering Graduate Programs.		
Total hours required for the concentration:		12

Requirement	Description
Courses taken toward this concentration will count toward the student's graduate degree.	
Students must notify their department of their plan to pursue this concentration.	
When choosing courses, students must work directly with their department to ensure that all degree requirements will be met.	
Note that students who intend to complete both a Biomechanics Concentration and a Cancer Nanotechnology Concentration may only overlap one course between the two concentrations.	

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director of graduate studies: Wawrzyniec Dobrucki (dobrucki@illinois.edu)
overview of grad college admissions & requirements: <https://grad.illinois.edu/admissions/apply> (<https://grad.illinois.edu/admissions/apply/>)
department website: <https://bioengineering.illinois.edu/>
program website: <https://bioengineering.illinois.edu/academics/graduate/phd/concentrations.html>
department faculty: <https://bioengineering.illinois.edu/directory/>
college website: <https://grainger.illinois.edu/>
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