BIOINFORMATICS: BIOENGINEERING, MS

for the Master of Science in Bioinformatics, Bioengineering Concentration

This program is not currently accepting applications.

Other Graduate Programs in 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 (http://catalog.illinois.edu/graduate/engineering/concentration/biomechanics/)Cancer Nanotechnology (http://catalog.illinois.edu/graduate/engineering/concentration/cancer-nanotechnology/)

Biomechanics (http://catalog.illinois.edu/graduate/engineering/concentration/biomechanics/)

for the Master of Science in Bioinformatics, Bioengineering Concentration

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, MEngMaterials 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, MEng (http://catalog.illinois.edu/graduate/engineering/mechanical-engineering-meng/)Mechanical Engineering, MS (http://catalog.illinois.edu/graduate/engineering/mechanical-engineering-ms/)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/)Cancer Nanotechnology (http://catalog.illinois.edu/graduate/engineering/concentration/cancer-nanotechnology/)

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available for:

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Information listed in this catalog is current as of 11/2021

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/).
### Thesis Option

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<td>BIOE 599</td>
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<td>BIOE 504</td>
<td>Analytical Methods in Bioeng</td>
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<td>or BIOE 505</td>
<td>Computational Bioengineering</td>
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#### Computer Science and Informatics (choose one)
- CS 411  Database Systems
- CS 466  Introduction to Bioinformatics
- CS 473  Algorithms
- CPSC 565  Perl & UNIX for Bioinformatics
- IS 455  Database Design and Prototyping
- IS 542  Research and Inquiry for Youth
- STAT 428  Statistical Computing
- STAT 440  Statistical Data Management
- STAT 448  Advanced Data Analysis
- STAT 480  Data Science Foundations
- STAT 525  Computational Statistics

#### Fundamental Bioinformatics (choose one)
- ANSC 542  Applied Bioinformatics
- ANSC 545  Statistical Genomics
- CHBE 571  Bioinformatics
- CPSC 567  Bioinformatics & Systems Biol
- CS 466  Introduction to Bioinformatics
- IB 467  Principles of Systematics
- MCB 432  Computing in Molecular Biology

#### Biology (choose one)
- ANSC 441  Human Genetics
- ANSC 444  Applied Animal Genetics
- ANSC 446  Population Genetics
- BIOP 401  Introduction to Biophysics
- BIOP 550  Biomolecular Physics
- CPSC 452  Advanced Plant Genetics
- CPSC 466  Genomics for Plant Improvement
- CPSC 563  Chromosomes
- CPSC 564  Plant Gene Regulation
- MCB 400  Cancer Cell Biology
- MCB 450  Introductory Biochemistry
- MCB 501  Advanced Biochemistry
- MCB 502  Advanced Molecular and Cell Biology

One course in systems biology from departmental list (http://bioengineering.illinois.edu/graduate-programs/prospective-graduate-students/bioengineering-courses-illinois/#electives)  

#### Elective Courses

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### Non-Thesis Option

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<td>BIOE 504</td>
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<td>4</td>
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One course in systems biology from departmental list (http://bioengineering.illinois.edu/graduate-programs/prospective-graduate-students/bioengineering-courses-illinois/#electives)  

#### Elective Courses

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### Other Requirements

<table>
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<th>Requirement</th>
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<td>Other Requirements and Conditions</td>
<td>A concentration is required.</td>
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Total Hours 32

1 Other Requirements

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A minimum of 12 500-level credit hours overall applied toward the degree, with 8 hours being Bioengineering courses; a maximum of 2 hours of seminar courses can be counted towards these 12 hours.

The non-thesis option is only available with permission of the advisor. Requirements include an additional 8 hours of elective courses which, with the approval of an advisor, may include supervised research experiences including internships and projects.

Minimum GPA: 3.0