

PlusOne Programs

MS Bioinformatics

Northeastern University
College of Science

Eligibility

Students must be pursuing one of the following undergraduate degrees:

- BS Behavioral Neuroscience
- BS Biology
- BS Computer Science and Behavioral Neuroscience
- BS Computer Science
- BS Computer Science and Biology
- BS Data Science and Behavioral Neuroscience
- BS Data Science and Biology
- BS Biochemistry
- BS Biochemistry and Data Science
- BS Cell and Molecular Biology

A minimum cumulative 3.000 GPA is required.

COURSE PREREQUISITES

BS Computer Science and Behavioral Neuroscience

BS Data Science and Behavioral Neuroscience

Enrolled in or have completed:

- BIOL 2301/2302 Genetics and Molecular Biology
- CHEM 2311/2312 Organic Chemistry 1
- At least 1 Behavioral Neuroscience core course

BS Behavioral Neuroscience

Enrolled in or have completed:

- BIOL 2301/2302 Genetics and Molecular Biology
- CHEM 2313/2314 Organic Chemistry 2
- At least 1 Behavioral Neuroscience core course

BS Computer Science

Enrolled in or have completed:

- BIOL 2301/2302 Genetics and Molecular Biology

BS Biology

BS Biochemistry

BS Cell and Molecular Biology

BS Biochemistry and Data Science

BS Computer Science and Biology

BS Data Science and Biology

Enrolled in or have completed:

- BIOL 2301/2302 Genetics and Molecular Biology
- BIOL 3611/3612 Biochemistry

Curriculum Requirements

A maximum of 16 graduate credits completed as an undergraduate can be used toward the Master of Science degree.

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application
requirements



REQUIRED COURSES TO COMPLETE AS AN UNDERGRADUATE STUDENT

BS Behavioral Neuroscience

- BINF 6200 Bioinformatics Programming (4 SH) in place of Physics
- BINF 6310 Introduction to Computational Methods in Bioinformatics (4 SH) in place of one BNS Advanced Elective/Core Course
- BIOL 5595, BIOL 5601, or PT5410/11 double counts as a BNS Advanced Elective/Core Course and MS Elective
- 5000+ level biology course (4 SH) double counts as a BNS Advanced Biology Elective and MS Elective

BS Computer Science and Behavioral Neuroscience

BS Data Science and Behavioral Neuroscience

- BINF 6200 Bioinformatics Programming (4 SH) or BINF 6400 Genomics in Bioinformatics (4SH) in place of one integrative upper-division course
- BINF 6310 Introduction to Computational Methods in Bioinformatics (4 SH) in place of one integrative course
- Two 5000+ level electives (choice of BIOL5587, BIOL5595, BIOL5601, or PT5410/5411) double counts as BNS foundation/core courses and MS electives

BS Biochemistry

- BINF 6200 Bioinformatics Programming (4 SH) in place of one general elective
- BINF 6310 Introduction to Computational Methods in Bioinformatics (4 SH) in place of one general elective
- BIOT 5621 Protein Principles in Biotechnology (3 SH) and BIOL 5100 Biology Colloquium (1 SH) in place of CHEM 4620 and double counts as MS electives
- BIOL 6301 Molecular Cell Biology (4 SH) in place of BIOL 4707 and double counts as MS elective

BS Biochemistry and Data Science

- BINF 6200 Bioinformatics Programming (4 SH) or BINF 6400 Genomics in Bioinformatics (4SH) as integrative course
- BINF 6310 Introduction to Computational Methods in Bioinformatics (4 SH) as integrative course
- BIOT 5621 Protein Principles in Biotechnology (3 SH) and BIOL 5100 Biology Colloquium (1 SH) in place of CHEM 4620 and double counts as MS electives
- One DS or CS 5000+ level course listed under Khoury elective courses (4 SH) double counts as BS and MS elective

BS Biology

- BINF 6200 Bioinformatics Programming (4 SH) in place of one general elective
- BINF 6310 Introduction to Computational Methods in Bioinformatics (4 SH) in place of one general elective
- Two BIOL/EEMB/ENVR 5000+ level courses double counts as intermediate/advanced biology electives and two MS electives

BS Cell and Molecular Biology

- BINF 6200 Bioinformatics Programming (4 SH) in place of one general elective
- BINF 6310 Introduction to Computational Methods in Bioinformatics (4 SH) in place of one general elective
- BIOL 5591 Advanced Genomics (4 SH) double counts as BS molecular biology requirement and MS elective
- 5000+ level CMB elective course (4 SH) double counts as intermediate/advanced CMB elective and MS elective

REQUIRED COURSES TO COMPLETE AS AN UNDERGRADUATE STUDENT CONT'D

BS Computer Science

- BINF 6200 Bioinformatics Programming (4 SH) or BINF 6400 Genomics in Bioinformatics (4SH) in place of one general elective
- BINF 6310 Introduction to Computational Methods in Bioinformatics (4 SH) in place of one general elective
- Two 5000+ level courses listed under computer science elective courses or graduate equivalent double counts as two BS and MS electives

BS Computer Science and Biology

- BINF 6200 Bioinformatics Programming (4 SH) or BINF 6400 Genomics in Bioinformatics (4SH) in place of intermediate/advanced biology elective
- BINF 6310 Introduction to Computational Methods in Bioinformatics (4 SH) as biology integrative course
- 5000+ level course listed under Khoury elective courses or graduate equivalent double counts as BS and MS elective
- 5000+ level course listed under Intermediate and advanced science courses double counts as BS and MS elective

BS Data Science and Biology

- BINF 6200 Bioinformatics Programming (4 SH) or BINF 6400 Genomics in Bioinformatics (4SH) in place of intermediate/advanced biology elective
- BINF 6310 Introduction to Computational Methods in Bioinformatics (4 SH) as biology integrative course
- 5000+ level course listed under Khoury elective courses or graduate equivalent double counts as BS and MS elective
- 5000+ level BIOL elective double counts as BS and MS elective

REQUIRED COURSES TO COMPLETE AS GRADUATE STUDENT

- BIOT 5219 The Biotechnology Enterprise (2 SH)
- MATH 7340 Statistics for Bioinformatics (4 SH)
- BIOL 6381 Ethics in Biological Research (2 SH)
- Two Graduate Electives (8 SH)
- EESC 6500 Professional Development for Co-op (0 SH)
- EESC 6964 Co-op Work Experience (0 SH)

BINF Courses are offered in Fall and Spring semesters only. Some graduate classes, research or thesis credits could be completed in the summer, depending on the availability of courses and individual student plans.

PlusOne students meet with the graduate co-op coordinator within one month of starting the program in order to plan the timing of the graduate co-op.

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