PlusOne Programs

Master's Degree Programs for Northeastern Undergraduates

The PlusOne program allows students the opportunity to pursue both a bachelor's and master's degree successively in a condensed period of time.

Northeastern University
College of Science

For students pursuing a PlusOne degree, several courses/credits of undergraduate work are replaced by graduate coursework, thus permitting the completion of an undergraduate degree, as well as a full master's degree, in a shorter period of time than would be possible if students pursued each degree separately through the traditional route. In most programs, with appropriate academic progress, students receive the master's degree one year after completing the undergraduate degree.

Depending on the program, students have the opportunity to do additional co-ops, work on an independent research project, and participate in other experiential learning opportunities. These experiences sharpen their critical thinking and analysis skills, while providing additional professional experience, making them more competitive upon entering the workforce.

When to Apply

Students should apply to enter the PlusOne program no earlier than their fifth academic semester and at least two semesters before expecting to earn the Bachelor of Science Degree.

Application Deadlines:

Fall – August 15
Spring – December 1st

Graduate Student Services

COSGradAdmissions@northeastern.edu
617-373-4275

Note: Any financial aid a student may have received from the university while an undergraduate will not continue once the student obtains graduate status. **PlusOne students are not eligible for the Double Husky Scholarship**

MS Bioinformatics

Eligibility and Admission

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 one 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 one 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

Application Process

See Northeastern's College of Science website for more information and details on how to apply: https://cos.northeastern.edu/admissions/graduate-programs/plusone-accelerated/

Curriculum Requirements

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

Required courses to complete as an undergraduate student

BS Behavioral Neuroscience
- BINF 6310 Introduction to Computational Methods in Bioinformatics (4 SH) *in place of physics*
- BINF 6200 Bioinformatics Programming (4SH) *in place of one BNS core*
- BIOL 5587 Comparative Neurobiology (4 SH) *double counts as a BNS core and MS elective*
- 5000+ level BIOL course (4 SH) *double counts as an advanced biology course and MS elective*

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

BS Biochemistry
- BINF 6310 Introduction to Computational Methods in Bioinformatics (4 SH) *in place of one general elective*
- BINF 6200 Bioinformatics Programming (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 6310 Introduction to Computational Methods in Bioinformatics (4 SH) *as integrative course*
- BINF 6200 Bioinformatics Programming (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 6310 Introduction to Computational Methods in Bioinformatics (4 SH) *in place of one general elective*
- BINF 6200 Bioinformatics Programming (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 6310 Introduction to Computational Methods in Bioinformatics (4 SH) *in place of one general elective*
- BINF 6200 Bioinformatics Programming (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*

BS Computer Science

- BINF 6310 Introduction to Computational Methods in Bioinformatics (4 SH) *in place of one general elective*
- BINF 6200 Bioinformatics Programming (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 6310 Introduction to Computational Methods in Bioinformatics (4 SH) *as biology integrative course*
- BINF 6200 Bioinformatics Programming (4 SH) *in place of intermediate/advanced biology elective*
- 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 6310 Introduction to Computational Methods in Bioinformatics (4 SH) *as biology integrative course*
- BINF 6200 Bioinformatics Programming (4 SH) *in place of intermediate/advanced biology elective*
- 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 a graduate student

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