Washington University in St. Louis

Bioinformatics Minor

Program Requirements

- **Total units required:** 23-24 units

Mindful of the emerging opportunities at the interface of biology and computer science, the Department of Biology and the Department of Computer Science & Engineering have fashioned the minor in bioinformatics.

Core Courses

Code	Title	Units
Biol 2960	Principles of Biology I	4
Biol 2970	Principles of Biology II	4
CSE 131	Introduction to Computer Science	3
CSE 247	Data Structures and Algorithms	3
ESE 326	Probability and Statistics for Engineering	3
or SDS 2200	Elementary Probability and Statistics	
or SDS 3200	Elementary to Intermediate Statistics and Data Analysis	
or SDS 3211	Statistics for Data Science I	
or DAT 120 & DAT 121	Managerial Statistics I and Managerial Statistics II	
Total Units		**17**

Advanced Biology Elective

Choose one of the following:

Code	Title	Units
Biol 3492	Laboratory Experiments with Eukaryotic Microbes	3
Biol 3493	Bacterial Bioprospecting and Biotechnology	3
Biol 4181	Population Genetics	3
Biol 4220	Practical Bioinformatics	4
Biol 4342	Research Explorations in Genomics	4
Biol 437	Laboratory on DNA Manipulation	4
Biol 4525	Structural Bioinformatics of Proteins (Writing Intensive)	4

Computer Science & Engineering Elective

Choose one of the following:

Code	Title	Units
CSE 514A	Data Mining	3
CSE 584A	Algorithms for Biosequence Comparison	3
or Biol 5504	Algorithms for Biosequence Comparison	
CSE 587A	Algorithms for Computational Biology	3

Additional Information

It is anticipated that, for certain students, some portion of the introductory sequence will overlap with the courses required for the major and that these courses will be applicable to both the major and the minor. Upper-level courses used to fulfill the minor requirements may not be used to fulfill the requirements of another major or minor in Arts & Sciences.

Arts & Sciences students should declare the minor within Arts & Sciences. They will be assigned an advisor in Biology. Per Arts & Sciences policy, students with a major in the Department of Biology are not eligible to declare this minor. Per Arts & Sciences policy, Arts & Sciences students must complete 9 units of upper-level course work toward the minor.

McKelvey, Olin, and Sam Fox students should declare the minor within the McKelvey School of Engineering. They will be assigned an advisor in Computer Science & Engineering.

A minimum grade of C- is required for all courses to count toward the minor. Students may apply no more than one course taken outside of Washington University toward the minor requirements. Courses earned through Washington University–approved study abroad programs are considered to be resident units and may count toward this minor where applicable with no limit.

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