

Minor in Bioinformatics (BINF)

The Bioinformatics (BINF) minor creates a strong foundation in knowledge and applications of software programs and databases commonly used by bioinformaticians and computational biologists. The student will gain an understanding of how bioinformatics data are organized and utilized to gain insights into molecular life science. The BINF minor trains students in the fundamentals of the design of algorithms and the implementation of computer programs that analyze biological data. This minor is suggested for students majoring in Biochemistry, Biology, and Chemistry. Other majors can opt for this minor but may have to take additional courses.

Required prerequisites for the Minor

There are required prerequisites for the BINF minor for students who are not Biology, Chemistry, or Biochemistry majors.

These prerequisites are: **BIOL 1100, BIOL 1200, and MATH 1085 or MATH 1083 or MATH 1040** (or equivalent Math course). Students must receive a grade of C or better in BIOL 1200 and the MATH course.

Requirement for the Minor

A total of 14-17 units are required. A minimum of 12 units in the minor must be distinct from the core requirements in the student's major, but may overlap with electives in the major.

Successful completion requires a 2.0 overall grade point average in the BINF minor, good academic standing, and completion of all minor courses by the time students earn their baccalaureate.

Requirements for the Minor (14-17 units)

Upper Division Required Courses (8 units)

BINF 4000 Bioinformatics	(3)
BINF 4500 Advanced Topics in Bioinformatics and Computational Biology	(1)
BIOL 3000 Biostatistics	(4)

Upper Division Electives (6-9 units)

From the list below with advisor approval, students majoring in Biology need to complete 9 units; all other majors need to complete 6 units.

Note: A minimum of 12 units in the minor must be distinct from the core requirements in the student's major, but may overlap with electives in the major.

BINF 4540 Special Topics in Bioinformatics	(1-3)
BIOL 3400 Principles of Genetics	(3)
BIOL 4080 Advanced Biostatistics	(3)
BIOL 4150 Population Genetics	(3)
BIOL 4540 Special Lecture Topics in Biology	(1-3)
CHEM 4300 Introduction to Biochemistry	(3)
CHEM 4310 Biochemistry I	(3)
CHEM 4320 Biochemistry II	(3)
CHEM 4800 Special Topics in Advanced Chemistry Lecture	(1-3)