

## BIOINFORMATICS

Minimum courses required: 12 with at least three at the 300 level and a capstone experience.

Course requirement	Semester Taken
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### Biology

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|----|---|-------|
| 1. | BIO 112: Cells and Genes  | _____ |
| 2. | BIO 211: Genetics   | _____ |
| 3. | BIO 305: Biochemistry or BIO 316: Molecular Biology and Biotechnology | _____ |

### Chemistry

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|----|-------------------------------|-------|
| 4. | CHEM 153: Chemical Principals | _____ |
| 5. | CHEM 253: Organic Chemistry I | _____ |

### Computer Science

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|----|--|-------|
| 6. | COMP 115: Robots, Games and Problem Solving or COMP 242: or BIO 242: DNA | _____ |
| 7. | COMP 116: Data Structures  | _____ |
| 8. | COMP 325: Database Systems   | _____ |

### Mathematics

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|-----|---|-------|
| 9.  | MATH 151: Accelerated Statistics  | _____ |
| 10. | MATH 216: Computational Molecular Biology or MATH 251: Methods of Data Analysis | _____ |

### Recommended courses

Two electives, one at the 300 level and one at the 200 level or above, from the list of the recommended courses from biology, computer science, chemistry or mathematics:

BIO 111: Evolution and Ecology  
BIO 219: Cell Biology  
BIO 221: Microbiology and Immunology  
BIO 254: Developmental Biology  
BIO 303: Evolution  
BIO 317: Molecular Ecology and Evolution

CHEM 254: Organic Chemistry II  
CHEM 355: Physical Chemistry I  
CHEM 356: Physical Chemistry II

COMP 215: Algorithms  
COMP 255: Artificial Intelligence

MATH 101: Calculus I  
MATH 104: Calculus II  
MATH 211: Discrete Mathematics  
MATH 236: Multivariable Calculus  
MATH 241: Theory of Probability  
MATH 342: Mathematical Statistics

PHYS 170: Introductory Physics I  
PHYS 171: Introductory Physics II

**Others:**  
ECON 112: Introduction to Microeconomics  
PHIL 111: Ethics  
PHIL 125: Logic  
PHIL 241: Bioethics

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|-----|-------|-------|
| 11. | _____ | _____ |
| 12. | _____ | _____ |

**CAPSTONE** (to be determined by faculty in your area of interest) \_\_\_\_\_