

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 316: Molecular Biology and Genomics (recommended) or BIO 305: Biochemistry
<i>(Note: BIO 305 requires both CHEM 253 and CHEM 254)</i> | _____ |

Computer Science

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| 4. | COMP 115: Robots, Games and Problem Solving or COMP 242: DNA | _____ |
| 5. | COMP 116: Data Structures <i>(prerequisite: COMP 115 or COMP 242)</i> | _____ |
| 6. | one 300-level Computer Science <i>(talk to your advisor for the most appropriate choice)</i> | _____ |

Chemistry

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| 7. | CHEM 153: Chemical Principles | _____ |
| 8. | CHEM 253: Organic Chemistry I | _____ |

Mathematics

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| 9. | MATH 151: Introduction to Data Science | _____ |
| 10. | MATH 251: Methods of Data Analysis <i>(recommended)</i>
or MATH 241: Theory of Probability <i>(Calculus I prereq)</i> | _____ |

Electives

Two (2) electives. COMP 215 Algorithms is strongly recommended. At least one elective must be at the 300 level or above from the following list of recommended courses from biology, computer science, chemistry, mathematics, or philosophy:

BIO 219: Cell Biology BIO 221: Microbiology and Immunology BIO 254: Developmental Biology BIO 303: Evolution BIO 317: Molecular Ecology and Evolution COMP 215: Algorithms <i>(Comp 116 prereq)</i> COMP 255: Artificial Intelligence <i>(Comp 116 prereq)</i> COMP 315 Parallel Algorithms <i>(Comp 215 prereq)</i> CHEM 254: Organic Chemistry II CHEM 355: Chemical Thermodynamics <i>(Calc II prereq)</i>	MATH 101: Calculus I MATH 104: Calculus II MATH 211: Discrete Mathematics MATH 236: Multivariable Calculus <i>(Calculus II prereq)</i> MATH 241: Theory of Probability <i>(Calculus I prereq)</i> MATH 342: Mathematical Statistics <i>(Methods 241 prereq)</i> PHIL 241: Bioethics
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| 11. | _____ | _____ |
| 12. | _____ | _____ |

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

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| 13. | _____ | _____ |
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