BS BIOLOGY MOLECULAR EMPHASIS/MS BIOINFORMATICS
DEGREE REQUIREMENTS

Undergraduate-level Coursework:

Biology

- BIOL 101 General Biology I (3 credits)
- BIOL 111 General Biology I Laboratory (1 credit)
- BIOL 102 General Biology II (3 credits)
- BIOL 112 General Biology II Laboratory (1 credit)
- BIOL 251 Cell Biology (3 credits)
- BIOL 265 Ecology (3 credits)
- BIOL 282 Genetics (3 credits)
- BIOL 283 Genetics Laboratory (1 credit)
- BIOL 388 Bioinformatics (3 credits)
- One of the following:
  - BIOL 366L Biochemistry Laboratory (2 credits)
  - BIOL 390 Molecular Biology Laboratory (4 credits)
  - BIOL 391 Forensic Molecular Biology (5 credits)
  - BIOL 396 Research (3 credits)
  - BIOL 397H Sr. Honors Thesis (3 credits)
  - BIOL 398 Internship (1-3 credits)
- Biology Electives* (2-5 credits) from Molecular Emphasis approved electives [can count towards BIOL BS elective requirements]

Chemistry

- CHEM 101 General Chemistry I (3 credits) or CHEM 105 (4 credits)
- CHEM 111 General Chemistry Laboratory I (1 credit)
- CHEM 102 General Chemistry II (3 credits) or CHEM 106 (4 credits)
- CHEM 112 General Chemistry Laboratory II (1 credit)
- CHEM 223 Organic Chemistry I (3 credits) or CHEM 221 (4 credits)
- CHEM 225 Organic Chemistry Laboratory I (1 credit)
- CHEM 224 Organic Chemistry II (3 credits) or CHEM 222 (4 credits)
- CHEM 226 Organic Chemistry Laboratory II (1 credit)
- CHEM 361 Survey in Biochemistry (3 credits)

Mathematics and Statistics

- MATH 131 Applied Calculus I (3 credits) or MATH 161 (4 credits)
- MATH 132 Applied Calculus II (3 credits) or MATH 161 (4 credits)

Physics

- PHYS 111 Physics I (3 credits)
- PHYS 111L Physics Laboratory I (1 credit)
- PHYS 112 Physics II (3 credits)
- PHYS 112L Physics Laboratory II (1 credit)
Graduate Coursework:

Chemistry
- CHEM 465 Proteomics (3 credits)

Computer Science
- COMP 483 Computational Biology (4 credits) [Must satisfy prerequisites for course]

Statistics
- STAT 437 Quantitative Methods in Bioinformatics (4 credits) [Must satisfy prerequisites for course]

Bioinformatics
- BIOI 500 Advanced Bioinformatics (2 credits)* [can count towards BIOL BS elective requirements]
- BIOI 501 Bioinformatics Seminar (1 credit)* [can count towards BIOL BS elective requirements]

Additional Requirements by Track:

Thesis Track (13 credit hours):
- UNIV 370 Responsible Conduct in Research and Scholarship 2 day workshop (0 credits)
- 1 Bioinformatics Elective (3 credits)* [can count towards BIOL BS elective requirements]
- BIOI 494 Bioinformatics Research Design (1 credit)
- BIOI 499 Bioinformatics Research (8 credits total)
- BIOI 595 Thesis (1 credit)

Non-thesis Track (19 credit hours):
- 4 Bioinformatics Electives (12 credits total)* [can count towards BIOL BS elective requirements]
- BIOI 498 Bioinformatics Internship (1 credit)

Approved 12.2016