**Curriculum Plan for BIOLOGY MAJOR WITH EMPHASIS IN MICROBIOLOGY**

### Supporting Courses, 28-29 credits
- **BIOLOGY 201** Principles of Biology: Cellular & Molecular Processes, 3 cr (F,S) & **BIOLOGY 202** Principles of Biology Lab: Cellular and Molecular Processes, 1 cr (F,S)
- **BIOLOGY 203** Principles of Biology: Organisms, Ecology & Evolution, 3 cr (F,S) WE & **BIOLOGY 204** Principles of Biology Lab: Organisms, Ecology, and Evolution, 1 cr (F,S) WE
- **CHEM 211** Principles of Chemistry I, 4 cr (F,S) & **CHEM 213** Principles of Chemistry I Lab, 1 cr (F,S)
- **CHEM 212** Principles of Chemistry II, 4 cr (F,S) & **CHEM 214** Principles of Chemistry II Lab, 1 cr (F,S)
- **MATH 260** Introductory Statistics, 4 cr (F,S)

Mathematics, choose one of these:
- **MATH 104** Elementary Functions: Algebra & Trigonometry, 4 cr (F,S)
- **MATH 201** Calculus for the Management & Social Sciences, 3 cr (F,S)
- **MATH 202** Calculus & Analytic Geometry I, 4 cr (F,S)

Writing, choose one of these:
- **ENG COMP 105** Expository Writing, 3 cr (F,S)
- **INFO SCI 390** Technical Writing, 3 cr WE

### Upper-Level Courses, 34-38 credits
**Required courses, minimum of 13 credits**
- **BIOLOGY 303** Genetics, 3 cr (F,S)
- **BIOLOGY 309** Evolutionary Biology, 3 cr (F,S)
- **ENV SCI 302** Principles of Ecology, 4 cr (F,S) WE
- **BIOLOGY 402** Advanced Microbiology, 4 cr (SE) WE
- **BIOLOGY 302** Principles of Microbiology, 4 cr (F,S)
  Or  **BIO 322** Environmental Microbiology, 4 cr (S)
- **BIOLOGY 311** Plant Physiology, 4 cr (F) WE
  Or  **BIOLOGY 346** Comparative Physiology, 3 cr (S)
- **BIOLOGY 407** Molecular Biology, 3 cr (S)

Choose one of the following groups, minimum of eight credits:
- **CHEM 300** Bio-organic Chemistry, 3 cr (S) & **CHEM 301** Bio-organic Chemistry Lab, 1 cr (S)
- **CHEM 330** Biochemistry, 3 cr (FO) & **CHEM 331** Biochemistry Lab, 1 cr (F,S)
  Or  **CHEM 302** Organic Chemistry I, 3 cr (F,S) & **CHEM 304** Organic Chemistry I Lab, 1 cr (F,S)
  Or  **CHEM 303** Organic Chemistry II, 3 cr (F,S) & **CHEM 305** Organic Chemistry II Lab, 1 cr (F,S)
- **CHEM 330** Biochemistry, 3 cr (FO) & **CHEM 331** Biochemistry Lab, 1 cr (F,S)

### Choose a minimum of 8 credits from:
- **BIOLOGY 307** Cell Biology, 3 cr (F,S) WE
- **BIOLOGY 308** Cell Biology Lab, 1 cr (F,S) WE
- **BIOLOGY 312** Mycology, 4 cr (FO)
- **BIOLOGY 309** Microbial Ecology, 3 cr (SO)
- **BIOLOGY 407** Molecular Biology, 3 cr (SO)
- **BIOLOGY 408** Molecular Biology Lab, 1 cr (S)
- **BIOLOGY 497** Internship, 1-12 cr (F,S)
- **HUM BIOL 422** Immunology, 3 cr (SO) WE
- **HUM BIOL 423** Immunology Lab, 1 cr (SO)

Seminar, one credit required:
- **BIOLOGY 490** Biology Seminar, 1 cr (F,S)

### General Education:
- Fine Arts 3cr
- Humanities 9cr
- Social Science 9cr (SS-1, SS-2)
- Natural Science 10-12cr (HB1, HB2, NPS1 & NPS2) – see page 8 of current Catalog for specifics
- Ethnic Studies 3cr
- World Culture 3cr
- Writing Emphasis (2 lower level)
- Writing Emphasis (2 upper level)

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**Updated 10/26/2017**