

## MICROBIOLOGY MAJOR (B.S.)

**A minimum of 18 units with the following distribution:**

### **1. Core requirements - all 8 units of the following:**

- \_\_\_\_\_ MI 200 *Microbiology* (fall and spring)
- \_\_\_\_\_ MI 212 *Molecular Microbiology* (fall & spring)
- \_\_\_\_\_ BI 221 *Biostatistics and Experimental Design* (fall & spring)
- \_\_\_\_\_ MI 314 *Clinical Microbiology* (odd year spring) (prerequisite: MI 200)
- \_\_\_\_\_ MI 512 *Applied, Food, and Industrial Microbiology* (odd year spring) (prerequisites: MI 200, BI 221, CH 112)
- \_\_\_\_\_ MI 521 *Immunology and Serology* (even year fall) (prerequisites: MI 200, CH 211)
- \_\_\_\_\_ MI 522 *Microbial Genetics* (odd year spring) (prerequisites: MI 200, MI 212, BI 221; CH 211)
- \_\_\_\_\_ MI 525 *Microbial Physiology* (odd year fall) (prerequisites: MI 200, CH 211)

### **2. Elective requirements - 2 units chosen from the following:**

- \_\_\_\_\_ MI 216 *General Pathology* (spring) (prerequisite: MI 200 or co-requisite: CH 112)
- \_\_\_\_\_ MI 291 *Special Topics in Microbiology* (periodically)
- \_\_\_\_\_ MI 493 *Undergraduate Research I* (prerequisite: Three units of Microbiology and BI 221; permission of the department chair)
- \_\_\_\_\_ MI 503 *Epidemiology* (even year spring) (prerequisite: MI 200, BI 221)
- \_\_\_\_\_ MI 513 *Pathogenic Fungi* (odd year fall) (prerequisite: MI 200)
- \_\_\_\_\_ MI 517 *Electron Microscopy* (offered as required) (prerequisites: MI 212 or BI 213, and CH 111, 112)
- \_\_\_\_\_ MI 523 *Microbial Ecology* (offered as required) (prerequisites: MI 200, additional unit of MI, CH 112)
- \_\_\_\_\_ MI 524 *Molecular Biotechnology* (offered as required) (prerequisite: MI 522 or BI 311)
- \_\_\_\_\_ MI 591 *Special Topics in Microbiology* (periodically)
- \_\_\_\_\_ CH 517 *Biochemistry I* (fall) (prerequisite: CH 211)

### **3. Cognate courses - 6 Units in Chemistry and Physics:**

- \_\_\_\_\_ CH 111 *General Chemistry I* (fall)
- \_\_\_\_\_ CH 112 *General Chemistry II* (spring) (prerequisite: CH 111)
- \_\_\_\_\_ CH 211 *Organic Chemistry I* (fall) (prerequisites: CH 111, 112)
- \_\_\_\_\_ CH 212 *Organic Chemistry II* (spring) (prerequisite: CH 211)
- \_\_\_\_\_ PY 131 *Elements of Physics I* (fall)
- \_\_\_\_\_ PY 132 *Elements of Physics II* (spring) (prerequisite: PY 131)
- or** \_\_\_\_\_ PY 141 *General Physics I* (fall) (co-requisite: MA 121)
- \_\_\_\_\_ PY 142 *General Physics II* (spring) (prerequisite: PY 141, MA 122)

**4. Math courses:**

\_\_\_\_\_ Mathematics 121 *Analytic Geometry & Calculus I* (fall)

**5. Senior Learning Community:**

\_\_\_\_\_ MI 400E *Research for Senior Thesis* (zero units) (fall, spring, summer) (permission of Senior Learning Community coordinator required)

\_\_\_\_\_ MI 400(W) *Senior Thesis* (fall, spring) (prerequisite: MI 400E)

**6. Capstone Course:**

\_\_\_\_\_ MI 491 *Recent Advances in Microbiology* (spring) (prerequisites: MI 200, 212, 314, 512, 521, 522, 525 and BI 221) (permission of the instructor)