## B.S. in Microbiology Graduation Checklist

### Microbiology Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BCMB(BIOL)(CHEM) 3100</td>
<td>Intro Biochemistry and Molecular Biology</td>
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<tr>
<td>or BCMB 4020</td>
<td>Biochemistry and Molecular Biology II</td>
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<tr>
<td>MIBO 3500</td>
<td>Introductory Microbiology</td>
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<tr>
<td>MIBO 3510L</td>
<td>Introductory Microbiology Laboratory</td>
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<tr>
<td>MIBO 4090</td>
<td>Prokaryotic Biology</td>
</tr>
<tr>
<td>MIBO 4300</td>
<td>Microbial Diversity and Evolution (Note: Pending CAPA approval, MIBO 4300 will become a 2 hr course).</td>
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<tr>
<td>MIBO(POPH)(IDIS) 4450-4450L</td>
<td>Microbial Genetics and Genomics or GENE 3200 (4 hrs) Genetics</td>
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### MAJOR REQUIRED I (Intensive MIBO Lab) – Choose one

The following also fulfill the Experiential Learning Requirement.

- MIBO 4600L (4 hrs) – Experimental Microbiology Lab
- MIBO 4970H (4 hrs) – Honors Research
- Two semesters of MIBO 4900L (4 hrs each) – Directed Research

### MAJOR REQUIRED II - Choose two

- CBIO(MIBO)(IDIS) 4100 (3 hrs) – Immunology
- EHSC(FDST)(MIBO) 4310-4310L (4 hrs) – Environmental Microbiology
- FDST(MIBO) 4120-4120L (3 hrs) – Food Fermentations
- MARS(MIBO) 4620 (3 hrs) – Microbial Ecology
- MIBO 4220 or 4220S (3 hrs) – Pathogenic Bacteriology
- MIBO 4500 (3 hrs) – Bacterial Symbioses
- MIBO 4600L (4 hrs) – Experimental Microbiology Lab
- MIBO 4680 (4 hrs) – Industrial Microbiology and Biotechnology
- MIBO 4700 (3 hrs) – Medical Mycology
- MIBO(POPH)(IDIS) 4450-44450L (4 hrs) – Microbial Genetics and Genomics

### MAJOR REQUIRED III (Upper level science elective) – Choose one from any 3-4 hour course below.

- CRSS(MIBO) 4610-4610L (3 hrs) – Soil Microbiology
- MIBO 4500 (3 hrs) – Bacterial Symbioses
- EHSC(FDST)(MIBO) 4310-4310L (4 hrs) – Environmental Microbiology
- MARS(MIBO) 4620 (3 hrs) – Microbial Ecology
- MIBO 4600L (4 hrs) – Experimental Microbiology Lab
- MIBO 4680 (4 hrs) – Industrial Microbiology and Biotechnology
- MIBO(POPH)(IDIS) 4450-44450L (4 hrs) – Microbial Genetics and Genomics

### Major Required

- PHYS 1111/1111L (4 hrs) – Introductory Physics-Electricity and Magnetism, Optics, Modern Physics or
- PHYS 1211/1211L (4 hrs) – Principles of Physics for Scientists and Engineers – Mechanics, Waves, Thermodynamics

### Computer Science • Math • Statistics

Choose one course from the following:

- BINF(BCMB) 4005 (2 hrs) – Essential Computing Skills for Biologists
- BIOS 2010 (4 hrs) – Biostatistics for Public Health Sciences
- CSCI 1210 (3 hrs) – Computer Modeling and Science
- CSCI 1301/1301L (4 hrs) – Introduction to Computing and Programming
- BIOE 8110 (3 hrs) – Mathematical Biology
- GENE 4220L (3 hrs) – Bioinformatics and Modeling Laboratory
- PBIO(BIOL)(BINF) 4550 (3 hrs) – Bioinformatics Applications
- MATH 2260 (4 hrs) – Calculus for Science and Engineering
- MATH(BCMB) 4780 (3 hrs) – Mathematical Biology
- STAT 2000 or 2100H (4 hrs) – Introductory Statistics

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