

B.S. in Microbiology Graduation Checklist

Microbiology Major Requirements
BCMB(BIOL)(CHEM) 3100 (4 hrs) - Intro Biochemistry and Molecular Biology or BCMB 4020 (3 hrs) - Biochemistry and Molecular Biology II MIBO 3500 (3 hrs) - Introductory Microbiology MIBO 3510L (3 hrs) - Introductory Microbiology Laboratory MIBO 4090 (3 hrs) - Prokaryotic Biology MIBO 4300 (2 hrs) – Microbial Diversity and Evolution (POPH)(MIBO)(IDIS) 4450-4450L (4 hrs) – Microbial Genetics and Genomics or GENE 3200 (4 hrs) Genetics



MAJOR REQUIRED I (Intensive MIBO Lab) – Choose one
<i>The following also fulfill the Experiential Learning Requirement.</i>
MIBO 4600L (4 hrs) – Experimental Microbiology Lab MIBO 4970H (4 hrs) – Honors Research MIBO 4970L (4 hrs) – Directed Research* Two semesters of MIBO 4900L (4 hrs each) – Directed Research

*Pending CAPA approval

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(POPH) 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 POPH(MIBO)(IDIS) 4650 (3 hrs) – Introduction to Virology POPH(MIBO)(IDIS) 4450-4450L (4 hrs) – Microbial Genetics and Genomics**

**Only if POPH(MIBO)(IDIS) 4450 not used in Major Requirements

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 POPH(MIBO)(IDIS) 4450-4450L (4 hrs) – Microbial Genetics and Genomics*

***can be used to satisfy Major Required III only if not used for Major Required I

Major Required	Computer Science • Math • Statistics
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 and PHYS 1112/1112L (4 hrs) – Introductory Physics-Electricity and Magnetism, Optics, Modern Physics or PHYS 1212/1212L (4 hrs) – Principles of Physics for Scientists and Engineers – Electricity and Magnetism, Optics, Modern Physics	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(BINF) 4780 (3 hrs) – Mathematical Biology STAT 2000 or 2100H (4 hrs) – Introductory Statistics STAT 3110 – Intro to Statistics for Life Sciences STAT 3120 – Intro to Probability for Life Sciences

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