B.S. in Microbiology Graduation Checklist

Effective Fall 2020

Microbiology Major Requirements - all required

__BCMB 3100 (4 hr) - Intro Biochemistry and Molecular Biology
or BCMB 4020 (3 hr) - Biochemistry and Molecular Biology II
__MIBO 3500 (3 hr) - Introductory Microbiology
__MIBO 3500L (1 hr) – Introductory Microbiology Laboratory I
__MIBO 3510L (3 hr) - Introductory Microbiology Laboratory II
__MIBO 4090 (4 hr) - Prokaryotic Biology
__GENE 3200-3200D (4 hr) Introduction to Genetics

Other Major Required

__PHYS 1111/1111L (4 hr) – Introductory Physics-Mechanics, Waves, Thermodynamics **or**

PHYS 1211/1211L (4 hr) – Principles of Physics for Scientists and Engineers – Mechanics, Waves, Thermodynamics

and

__PHYS 1112/1112L (4 hr) – Introductory Physics-Electricity and Magnetism, Optics, Modern Physics **or**

PHYS 1212/1212L (4 hr) – Principles of Physics for Scientists and Engineers – Electricity and Magnetism, Optics, Modern Physics

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Major Required I Fulfills the Experiential Learning Requirement; choose **one**

__MIBO 4600L (4 hr) – Experimental Microbiology Lab

or

__MIBO 4970R (4 hr) – Honors Research

MAJOR REQUIRED II Choose **two**

__CBIO(MIBO)(IDIS) 4100 (3 hr) - Immunology
__EHSC(FDST)(MIBO) 4310-4310L (4 hr) – Environmental Microbiology
__FDST(MIBO) 4120-4120L (3 hr) – Food Fermentations
__GENE 3210L (3 hr) – Experimental Genetics
__GENE 4520 (3 hr) – Genetics of Industrial Microorganisms
__GENE 4240L (3 hr) – Experimental Microbiome Genetics Laboratory
__MARS(MIBO) 4620 (3 hr) – Microbial Ecology
__MIBO(POPH) 4220 or 4220S (3 hr) – Pathogenic Bacteriology
__MIBO 4300 – Genome Editing in Mammals, Plants, and Microbes
__MIBO 4600L (4 hr) – Experimental Microbiology Lab*
__MIBO 4700 (3 hr) – Medical Mycology
__POPH(MIBO)(IDIS) 4650 (3 hr) – Introduction to Virology

*if not used in Major Required I

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MAJOR REQUIRED III (Upper level science elective) – Choose **one**

BCMB 3600 (3 hr) – Genomics and Bioinformatics

BCMB 4030L (4 hr) – Bioprocess Technology

CRSS(MIBO) 4610-4610L (3 hr) – Soil Microbiology

CBIO 3400 (3 hr) – Cell Biology

CBIO 4500 (3 hr) – Medical Parasitology

CBIO 4600 (3 hr) – Biology of Protists

ECOL(BIOL) 4150/4150L (4 hr) – Population Biology of Infectious Diseases

EHSC(FDST)(MIBO) 4310-4310L (4 hr) – Environmental Microbiology *****

GENE 4240L (3 hr) – Experimental Microbiome Genetics Laboratory *****

MARS(MIBO) 4620/4620L (3 hr) – Microbial Ecology *****

MIBO 4600L (4 hr) – Experimental Microbiology Lab *****

*if not used in Major Required I or II

Computer Science – Math-Statistics Choose **one**

BINF(BCMB) 4005 (2 hr) – Essential Computing Skills for Biologists

BINF(PBIO) 4550 (3 hr) – Concepts in Bioinformatics and Omics

BIOS 2010-2010L (4 hr) – Elementary Biostatistics

CSCI 1210 (3 hr) – Computer Modeling and Science

CSCI 1301/1301L (4 hr) – Introduction to Computing and Programming

GENE 4220L (3 hr) – Laboratory in Genetic Modeling

MATH 2260 (4 hr) – Calculus II for Science and Engineering

MATH(BINF) 4780 (3 hr) – Mathematical Biology

STAT 2000 or 2100H (4 hr) – Introductory Statistics

STAT 3110 (3 hr)– Intro to Statistics for Life Sciences

STAT 3120 (3 hr)– Intro to Probability for Life Sciences