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 GENE(BIOL) 3200 (4 hrs) - Genetics MIBO 3500 (3 hrs) - Introductory Microbiology MIBO 3510L (3 hrs) - Introductory Microbiology Laboratory MIBO 4090 (3 hrs) - Prokaryotic Biology

MAJOR REQUIRED I (Intensive MIBO Lab) – Choose one	MAJOR REQUIRED II - Choose two
BCMB 4030L (4 hrs) – Lab Techniques in BCMB BIOL(CBIO) 5050L (3 hrs) – Electron Microscopy Laboratory BTEC(BCMB)(PBIO) 4000L (4 hrs) – Methods in Biotechnology CBIO(BIOL) 3410L (4 hrs) – Laboratory in Cellular and Developmental Biology GENE(BIOL) 4210L (4 hrs) – Molecular Genetics Laboratory MIBO 4600L (4 hrs) – Experimental Microbiology Lab MIBO 4970H (4 hrs) – Honors Research Two semesters of MIBO 4900L (4hrs each) – Directed Research POPH(MIBO)(IDIS) 4450-4450L (4 hrs) and MIBO 4900L or MIBO 4960H (4 hrs)	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) 4220S (3 hrs) – Pathogenic Bacteriology MIBO 4300 (3 hrs) – Microbial Diversity and Evolution 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) 4450-4450L (4 hrs) – Microbial Genetics and Genomics POPH(MIBO)(IDIS) 4650 (3 hrs) – Introduction to Virology POPH(MIBO)(IDIS) 4651 (3 hrs) – RNA Virus Genomic Diversity

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 4600L (4 hrs) – Experimental Microbiology Lab
EHSC(FDST)(MIBO) 4310-4310L (4 hrs) – Environmental Microbiology	MIBO 4680 (4 hrs) – Industrial Microbiology and Biotechnology
MARS(MIBO) 4620-4620L (3 hrs) – Microbial Ecology	POPH(MIBO)(IDIS) 4450-4450L (4 hrs) – Microbial Genetics and Genomics
MIBO 4300 (3 hrs) – Microbial Diversity and Evolution MIBO 4500 (3 hrs) – Bacterial Symbioses	

Major Required	Computer Science • Math • Statistics
CHEM 2212/2212L (4 hrs) Modern Organic Chemistry II or CHEM 2312H/2312L (4 hrs) – Advanced Organic Chemistry II (Honors) 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 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 ENGG 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 (4 hrs) – Introductory Statistics STAT 2100H (4 hrs) – Introduction to Statistics and Computing (Honors)

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