

Microbiology Option: Environmental Health Track

Freshman Year	Credits
CHMY 141 - College Chemistry I & CHMY 142 - College Chemistry I Lab	4
BIOB 160 - Principles of Living Systems (F, S) or BIOB 260 - Cellular and Molecular Biology	4
M 151Q - Precalculus (F, S, Su) or M 161Q - Survey of Calculus or M 171Q - Calculus I	4
CHMY 143 - College Chemistry II & CHMY 144 - College Chemistry II Lab	4
GPHY 284 - Intro to GIS Science & Cartog	3
Core and/or Electives	11
Year Total:	30

Sophomore Year	Credits
BIOM 210RN - Environmental Health Science (F)	3
CHMY 211 - Elements of Organic Chemistry & CHMY 212 - Elements of Organic Chemistry Lab or CHMY 321 and CHMY 322	5
PHSX 205 - College Physics I (F, S, Su)	4
NRSM 240 - Natural Resource Ecology (F) or NRSM 101 - Natural Resource Conservation or BIOE 370 - General Ecology or BIOM 415 - Microbial Diversity, Ecology, and Evolution or SFBS 146 - Introduction to Sustainable Food and Bioenergy Systems or BIOM 460 - Infectious Diseases Ecology and Spillover	3
KIN 221 - Health Anatomy & Physiology (F, Su) or BIOH 201 and BIOH 211 or ANSC 265 and ANSC 266 or BIOH 185 - Integrated Physiology I	3
HDFS 271 - Statistical Measures of Well-Being (S) or BIOB 318 - Biometry or STAT 216Q - Introduction to Statistics	3
CULA 105 - Food Safety Sanitation (F) or BIOM 250 - Microbiology for Health Sciences: Infectious Diseases or BIOM 460 - Infectious Diseases Ecology and Spillover	2
CORE and/or Electives	7
Year Total:	30

Junior Year	Credits
BIOM 360 - General Microbiology (F, S)	5
MBEH 498 - Internship (F, S, Su))	3
EENV 387 - Environmental Laws and Regulations	3
CORE and/or Electives	19
Year Total:	30

Senior Year	Credits
BIOM 494 - Seminar/Workshop (capstone - take twice) or MBEH 490R - Undergraduate Research	2-3
CHTH 440 - Principles Of Epidemiology (F)	3
ENSC 407 - Environmental Risk Assessment (F)	3
BIOM 425 - Toxicology: Science of Poisons	3
CORE and/or Electives	18-19

Year Total:	29-31
Total Program Credits:	120

Required Electives

Students must take a minimum of 12 credits from this list.

Recommended electives

CULA 105	Food Safety Sanitation (whichever courses were not taken above)	2-3
or BIOM 250	Microbiology for Health Sciences: Infectious Diseases	
or BIOM 460	Infectious Diseases Ecology and Spillover	
MBEH 2XX	(HAZWOPER (Hazardous Waste Operations & Emergency Response)) in planning stage	
BIOM 419	Programming for Biologists (Programming for Biologists)	3
BIOM 430	Applied and Environmental Microbiology	4
LS 191	Special Topics (Introduction to Global Health (F))	3
ENSC 272CS	Water Resources (F)	3
ENSC 245IN	Soils (F)	3
ARCH 231CS	Issues in Sustainability	3
WRIT 221	Intermediate Tech Writing	3
or WRIT 326	Advanced Writing	
STAT 217Q	Intermediate Statistical Concepts	3
CHTH 210	Foundations in Community Health	3

Electives: Other

A minimum of 120 credits is required for graduation, with at least 42 course credits at 300 level or above.

MBEH 490R	Undergraduate Research	1-6
MBEH 492	Independent Study	1-3
MBEH 291		
MBEH 475		
MBEH 4XX		
MBEH 4XX		
AGSC 465R	Health, Agriculture, Poverty (F, S)	4
BCH 380	Biochemistry	5
BIOE 375	Ecological Responses to Climate Change	3
BIOH 201	Human Anatomy and Physiology I (F)	5
BIOH 303	Global Diseases and Health Disparities (S)	3
BIOM 400	Medical Microbiology (S)	3
BIOM 405	Host-Associated Microbiomes (S)	3
BIOM 410	Microbial Genetics (S)	3
BIOM 435	Virology (F)	3
BIOM 450	Microbial Physiology (F)	3
BIOM 452	Soil & Environmntl Microbiology (F)	3
BIOB 410	Immunology (F, S)	3
BIOO 262IN	Introduction to Entomology	3
BMGT 235	Management (F)	3
CHMY 323	Organic Chemistry II	4
CHTH 317	Health Behavior Theories	3
CHTH 428	Health Disparities	3
MBEH 498	Internship	2-12
ENSC 353	Environmental Biogeochemistry	3

ENSC 444	Watershed Hydrology (F)	3
ENSC 460	Soil Remediation (S)	3
ENSC 461	Restoration Ecology	3
ERTH 101IN	Earth System Sciences	4
GPHY 357	GPS Fund/App in Mapping (F)	3
GPHY 384	Adv GIS and Spatial Analysis (F, S)	3
GPHY 402	Water and Society	3
M 161Q	Survey of Calculus (Calculus can count as elective if M151 taken at MSU)	4
or M 171Q	Calculus I	
NASX 310	Native Cultures of North America	3
or NASX 450	History of American Indians	
NASX 415	Native Food Systems	3
NASX 476	American Indian Policy and Law	3
NRSM 430	Natural Resource Law	3
NUTR 221CS	Basic Human Nutrition (F, S, Su)	3
NUTR 226	Food Fundamentals (S)	3
NUTR 227	Food Fundamentals Lab (F, S)	2
NUTR 322	Food Service System Management (F)	3
PHSX 207	College Physics II	4
SFBS 346	Sustainable Food and Bioenergy Systems Summer Field Course	1
SFBS 451R	Sustainable Food Systems	3
STAT 411	Methods for Data Analysis I	3
STAT 412	Methods for Data Analysis II	3