B.S. IN MICROBIOLOGY, MICROBIAL ECOLOGY OPTION
2019/2020 CATALOG

REQUIRED MAJOR COURSES (C- OR BETTER)

BIOLOGY/MICROBIOLOGY CORE COURSES—ALL REQUIRED

BIOL 160N/161N—Principles of Living Systems/Lab (3/1) - autumn, summer
BIOL 170N/171N—Principles of Biological Diversity/Lab (3/2) - spring, summer
BIOL 260—Cell and Molecular Biology (4) - autumn, summer
BIOL 272—Genetics and Evolution (4) - spring

MICROBIAL ECOLOGY MAJOR COURSES—ALL REQUIRED

BIOL 370—General Ecology (3) – autumn
BIOL 360/361—General Microbiology/Lab (3/2) - autumn
BIOL 410/411—Microbial Genetics/Lab (3/1) - spring
BIOL 415—Microbial Diversity, Ecology, & Evolution (3) - spring
BIOL 450/451—Microbial Physiology/Lab (3/1) - autumn

BIOCHEMISTRY—CHOOSE BASIC OR ADVANCED

BASIC: BCH 380—Biochemistry (4) - autumn, spring
ADVANCED: BCH 480—Adv. Biochemistry I (3) - autumn
*BCH 482—Adv. Biochemistry II (3) - spring

Note: BCH 480-482 requires completion of the advanced chemistry sequence

MICROBIAL ECOLOGY DEPTH—CHOOSE 7 OR 9 CREDITS FROM THE FOLLOWING (7 IF BCH 480-482; 9 IF BCH 380); LABS REQUIRED

*BIOE 410/411—Immuno/Lab (3/2) - autumn
*BIOE 371—Ecology Lab (2) - autumn
BIOE 400—Aquatic Microbial Ecology - summer (FLBS)
*BIOE 428—Freshwater Ecology (5) - spring
BIOE 439—Stream Ecology (3) - summer (FLBS)

*BIOE 453—Lake Ecology (3) - summer (FLBS)
BIOM 427/428—Parasitology/Lab (2/2) - autumn
BIOM 435—Virology (3) - spring
BIOM 490—Advanced Undergrad Research
BIOM 491—Host-Microbe Inter. (3) - spring [DW substitution]
BIOO 433/434—Plant Physiology/Lab (3/1) - spring

REQUIRED COURSES OUTSIDE OF THE MAJOR (C- OR BETTER)

CALCULUS—CHOOSE ONE OF THE FOLLOWING

M162—Applied Calculus (4) - autumn, spring
M171—Calculus I (4) - autumn, spring

STATISTICS & PHYSICS—ALL REQUIRED

STAT 216—Intro to Statistics (4) - autumn, spring, summer
PHSX 205N/206N—College Physics I Lab (4/1) - autumn, spring, summer [or PHSX 216N]

CHEMISTRY—CHOOSE INTRO OR ADVANCED SEQUENCE

INTRO: CHMY 121N—Intro General Chemistry (4)
CHMY 123/124—Intro Organic/Biochem (4/2)
(all offered autumn, spring)

ADVANCED: CHMY 141N/142N—Coll. Chem I/Lab (4/1) – aut, spr
CHMY 143N/144N—Coll. Chem II/Lab (4/1) – spr, sum
CHMY 221/222—Organic Chem I/Lab (3/2) - autumn
CHMY 223/224—Organic Chem II/Lab (3/2) - spring

SCIENCE ELECTIVES—CHOOSE AT LEAST 6 CREDITS FROM THE FOLLOWING

CHMY 311—Analytical Chemistry (4) - autumn
CSCI 100—Intro to Programming (3) - autumn, spring
CSCI 135—Fund of Comp Science I (3) - aut, spring, sum
GEO 420—Hydrogeology (4) - intermittent
GEO 482—Global Change (3) - intermittent
M 172—Calculus II (4) - autumn, spring, summer
M 273—Multivariable Calculus (4) - autumn, spring
NRSM 210N—Soils, Water & Climate (3) - spring
PHSX 207/208—Coll. Physics II/Lab (4/1) [or 217/218]
STAT 451/457—Statistical Methods I (4) - autumn
STAT 452/458—Statistical Methods II (4) - spring

*ADVANCED COLLEGE WRITING REQUIREMENT MET WITH BIOM 411 (REQUIRED), AND ONE COURSE MARKED WITH *