BACHELOR OF SCIENCE DEGREE IN MICROBIOLOGY

CATALOG YEAR 2026

FOOD SAFETY AND MICROBIOLOGY EMPHASIS

NAME _____ **SID** _____ **DATE:**_____

GENERAL EDUCATION REQUIREMENTS

UNIV 101 – Intro. to the General Ed. Experience 1 ☐

Foundations Mathematics (3 Units)

Statistics or Math – consult advisor 3 ☐

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Writing Requirements (3-6 Units)

WRIT 101 – Freshman Composition 3 ☐

WRIT 102 – Freshman Composition 3 ☐

OR

WRIT 109H – Advanced First Year Comp. 3 ☐

Second Language Requirements (0-8 Units)

Complete **one** of the following:

Pass a proficiency exam at 2nd semester level. ☐

Complete courses through 2nd semester prof. ☐

Exploring Perspectives (12 Units)

Artist _____ 3 ☐

Humanist _____ 3 ☐

Natural Scientist _____ 3 ☐

Social Scientist_____ 3 ☐

Building Connections (6 Units)

_____ 3 ☐

_____ 3 ☐

Civics Institutions (3 units)

_____ 3 ☐

UNIV 301 - The GE ePortfolio 1 ☐

UNIVERSITY REQUIREMENTS:

out of 120 units Need:

out of 42 upper division units Need:

Writing Emphasis Course Requirement ☐

Cumulative GPA: MIC Major GPA:

Honors: Honors Units Completed:

Expected Graduation Term:

Career Goal:

FIRST YEAR SEMINAR (1 unit)

Microbiology students are strongly encouraged to take a first-year seminar or colloquium of their choice:

- ACBS 195 - Living Dangerously (Spring only)
- MIC 195D - Colloquium: This Wormy World (Fall only)
- MIC 195F - Plagues, Peoples, & Society (Spring only)
- MIC 195G - Careers in Microbiology (Fall only)

This checklist is intended as a guide. It is not an official document.

SUPPORTING COURSEWORK (~51 units)

Supporting Math: Complete **one** of the following:

MATH 113 – Elements of Calculus 3 ☐

MATH 119A – Math of Biol. Sys./Calc. 4 ☐

MATH 122A/B – Functions of Calc./1st Sem Calc. 5 ☐

MATH 125 – Calculus I 3 ☐

Statistics: Complete **one** of the following:

AAE 239 – Intro. to Stats and Data (SP only) 4 ☐

BIOS 376 – Intro. to Biostats 3 ☐

MATH 263 – Intro. to Statistics and Biostats 3 ☐

PSY 230 – Psyc. Measurements and Stats. 3 ☐

SBS 200 – Intro. to Stats for the Social Sci. 4 ☐

Communication: Complete **one** of the following:

ALC 422 – Communicating Knowledge in Ag. 3 ☐

COMM 101 – Intro. to Communication 3 ☐

COMM 119 – Public Speaking 3 ☐

MCB 181R – Introductory Biology I 3 ☐

MCB 181L – Introductory Biology I Lab 1 ☐

ECOL 182R – Introductory Biology II 3 ☐

ECOL 182L – Introductory Biology II Lab 1 ☐

MIC 285R – Principles of Microbiology (SP only) 4 ☐

MIC 285L – Principles of Microbio. Lab (SP only) 1 ☐

CHEM 151 – General Chemistry I 4 ☐

CHEM 152 – General Chemistry II 4 ☐

CHEM 241A – Organic Chemistry I 3 ☐

CHEM 243A – Organic Chemistry I Lab 1 ☐

CHEM 241B – Organic Chemistry II 3 ☐

CHEM 243B – Organic Chemistry II Lab 1 ☐

BIOC 384 – Foundations in Biochemistry 3 ☐

PHYS 110 – Introductory Physics I 4 ☐

GENERAL MICROBIOLOGY CORE (17 Units)

MIC 328R – Microbial Physiology (SP only) 3 ☐

MIC 350 – Core Concepts of Mol. Microbio. (FA only) 3 ☐

MIC 421B – Microbiological Techniques (FA only) 5 ☐

MIC 428R – Microbial Genetics (SP only) 3 ☐

MIC 329A – Microbial Diversity (FA only) 1 ☐

Food Safety and Microbiology Emphasis (12 units)

ACBS 380R – Food Safety & Microbiology (FA only) 3 ☐

MIC 430 – Food Micro and Biotechnology (SP only) 3 ☐

ACBS 355 – Food Processing/Prev Controls (FA only) 3 ☐

ACBS 380L – Food Safety & Microbiology Lab (FA only) 1 ☐

MIC 430L – Adv. Food Science & Micro Lab (SP only) 2 ☐

Microbiology Electives (8 units)

Microbiology Electives (2026 Catalog)

**Up to 3 units of Directed Research (ACBS/MIC 492), Independent Study (MIC 399/499), Internship (MIC 393/493), or Preceptorship (ACBS 491) can be counted as elective units. Must be microbiology related.*

ACBS 313- Principles of Animal Genetic Systems (3)
ACBS 317- One Health: A Microbial Perspective (3)
ACBS 320- Principles of Dairy Product Processing and Safety (3)
ACBS 355- Intro to Food Processing and Food Safety Preventive Controls (3)
ACBS 377- Food Toxicology (3)
ACBS 380L- Food Safety and Microbiology (1)
ACBS 380R- Food Safety and Microbiology (3)
ACBS 380R- Food Safety and Microbiology (3)
ACBS 403R- Biology of Animal Parasites (3)
ACBS 405- Principles of Livestock Health Management (3)
ACBS 409- Environmental Physiology of Domestic Animals (3)
ACBS 420- Meat Animal Composition (3)
ACBS 423- Mechanisms of Disease (3)
ACBS 437- Food Safety Laws and Legal Policies
ACBS 438- Ecology of Infectious Disease (3)
ACBS 443- Research Animal Methods (3)
BIOC 385- Metabolic Biochemistry (3)
ECOL 320- Genetics (4)
ECOL 326- Genomics (3)
ECOL 409- Evolution of Infectious Diseases (3)
ENVS 305- Pollution Science (3)
ENVS 408- Scientific Writing for Env., Ag., and Life Sciences (3)
ENVS 410- Microbial Biogeochemistry and Global Change (3)
ENVS 425- Environmental Microbiology (3)
ENVS 426- Environmental Microbiology Lab (2)
ENVS 475- Freshwater and Marine Algae (4)
MCB 410- Cell Biology (3)
MCB 411- Molecular Biology (3)
MCB 422- Problem Solving with Genetic Tools (3)
MCB 473- Recombinant DNA Methods and Applications (4)
MIC 320- Microbiomes (3)
MIC 340- Introduction to Biotechnology (3)
MIC 420- Pathogenic Bacteriology (3)
MIC 430- Food Microbiology and Biotechnology (3)
MIC 430L- Food Microbiology and Biotechnology Lab (2)
MIC 432- Comparative Immunology (3)
MIC 433- Medical and Molecular Virology (4)
MIC 450- Veterinary Microbiology (3)
MIC 452- Antibiotics: A Biological Perspective (3)
PHYS 103- Introductory Physics II (3)
PHYS 111- Introductory Studio Physics 2 (4)
PHYS 182- Introductory Laboratory II (1)
PLP 305- Introductory Plant Pathology (3)
PLP 427R- General Mycology (3)
PLS 333- General Virology (3)
PLS 360- Plant Physiology (3)
PLS 361- Plant Physiology Lab (1)
PLS 434- Industrial Biotechnology (3)

The following electives have not been offered recently, but are approved if available on the Schedule of Classes:

ACBS 310- Living in Symbiosis (3)
ACBS 395A- An ACBS Guide (1) - This course has been offered recently, but priority enrollment is limited to ANS/VSC majors.
ACBS 403L- Parasitology Laboratory (1)
ACBS 466- Principles of Disease (3)
ACBS 467- Computation in Biomedicine (3)
ECOL 320H- Genetics, honors section (3)
PLP 427L- General Mycology Lab (2)
PLS 456- Topics in Biotechnology (3)

Updated April 2025

Name: ____________________ Date: ___/___/___

ACBS Course Planning Sheet

Fall 20___	Requirement	Units

Spring 20___	Requirement	Units

Summer 20___	Requirement	Units

Fall 20___	Requirement	Units

Spring 20___	Requirement	Units

Summer 20___	Requirement	Units

Fall 20___	Requirement	Units

Spring 20___	Requirement	Units

Summer 20___	Requirement	Units

Fall 20___	Requirement	Units

Spring 20___	Requirement	Units