CATALOG YEAR 2025

BACHELOR OF SCIENCE DEGREE IN MICROBIOLOGY

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

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

GENERAL REQUIREMENTS

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

Mathematics: Complete one of the following: (3-5 units)

-MATH 113 – Elements of Calc. 3

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

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

-MATH 125 – Calculus I 3

Writing Requirement (3-6 units)

-ENGL 101 – Freshman Composition 3

-ENGL 102 – Freshman Composition 3

OR

-ENGL 109H – Advanced First Year Comp. 3

Second Language Requirement (0-8 units)

Complete one of the following:

-Pass a proficiency exam at 2nd semester level.

-Complete courses through 2nd semester prof.

General Education Requirements

Exploring Perspectives (12 Units)

-Artist _____ 3 ☐

-Humanist _____ 3 ☐

-Natural Scientist _____ 3 ☐

-Social Scientist_____ 3 ☐

Building Connections (9 Units)

_____ 3 ☐

_____ 3 ☐

_____ 3 ☐

UNIV 301 - The GE ePortfolio 1 ☐

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 - Colloquim: This Wormy World (Fall only)
MIC 195F - Plagues, Peoples, & Society (Spring only)
MIC 195G - Careers in Microbiology (Fall only)

UNIVERSITY REQUIREMENTS:

out of 120 units Need:
out of 42 upper division units Need:
out of 30 units in residence Need:

Mid-Career Writing Assessment - Complete?

Cumulative GPA: Major GPA:

Expected Graduation Term:

SUPPORTING COURSEWORK (46-47 units)

-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 (Spring only) 4
-MIC 285L – Principles of Microbiology 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 – Intro. Studio Physics I 4
- *Or take PHYS 102 (3) and PHYS 181 (1) 4
-PHYS 111 Studio Physics II 4
- *Or take PHYS 103 (3) and PHYS 182 (1) 4

Communication: Complete one of the following:

-ALC 422 – Comm. Knowledge in Ag. (Fall only) 3
-COMM 101 – Intro. to Communication 3
-COMM 119 – Public Speaking 3

Statistics: Complete one of the following:

-AREC 239 – Intro. to Stats and Data (Spring only) 4
-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

MAJOR CORE COURSEWORK* (28 units)

-MIC 328R – Microbial Physiology (Spring only) 3
-MIC 350 – Molecular Microbiology (Fall only) 3
-MIC 419 – Immunology (Fall only, some Summers) 4
-MIC 421B – Microbial Techniques (Fall only) 5
-MIC 428R – Microbial Genetics (Spring/Summer) 3
-MIC 428L – Microbial Genetics Lab (Spring only) 2

MIC Elective*(8 units) See Microbiology Elective List

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A maximum of 9 units of your major core coursework (28 units including 8 MIC Elective units) may double dip with another major or minor. The remaining core units must be unique and cannot double dip with another major or minor.

For more information, contact: Ms. Micah Parrish, micahparrish@arizona.edu or (520) 626-3807.

| Credit Type – EN= Enrollment at UA, IP= In Progress, TR=Transfer Credit, TE= Test Credit |

Microbiology Electives (2025 Catalog)

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

Fall Semester
ACBS 380R- Food Safety & Microbiology (3)
ACBS 380L- Food Safety & Microbiology (1)
ACBS 423- Mechanisms of Disease (3)
ACBS 438- Ecology of Infectious Disease (3)
BIOC 385- Metabolic Biochemistry (3)
ECOL 320- Genetics (4)
ECOL 326- Genomics (3)
ECOL 409- Evolution of Infectious Diseases (3)
ENVS 408- Scientific Writing for Env., Ag., & Life Sciences (3)
ENVS 425- Environmental Microbiology (3)
ENVS 426- Environmental Microbiology Lab (2)
MCB 410- Cell Biology (3)
MCB 422- Problem Solving with Genetic Tools (3)
MIC 329A- Microbial Diversity (3)
MIC 340- Introduction to Biotechnology (3)
MIC 432- Comparative Immunology (3)
MIC 420- Pathogenic Bacteriology (3)
MIC 450- Veterinary Microbiology (3)
MIC 452- Antibiotics: A Biological Perspective (3)
PLP 305- Introductory Plant Pathology (3)
PLP 427R- General Mycology (3)
PLS 333- General Virology (3)
PLS 434- Industrial Biotechnology (3)

Spring Semester
ACBS 313- Principles of Animal Genetic Systems (3)
ACBS 317- One Health: A Microbial Perspective (3)
ACBS 377- Food Toxicology (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 443- Research Animal Methods (3)
BIOC 385- Metabolic Biochemistry (3)
ECOL 409- Evolution of Infectious Diseases (3)
ENVS 408- Scientific Writing for Env., Ag., & Life Sciences (3)
ENVS 425- Environmental Microbiology (3)
ENVS 475- Freshwater and Marine Algae (4)
MIC 320- Microbiomes (3)
MIC 340- Introduction to Biotechnology (3)
MIC 430- Food Microbiology and Biotechnology (3)
MIC 430L- Food Microbiology and Biotechnology Lab (2)
MIC 433- Medical and Molecular Virology (4)
MCB 411- Molecular Biology (3)
MCB 473- Recombinant DNA Methods and Applications (4)

Summer Semester
ACBS 313- Principles of Animal Genetic Systems (3)
ACBS 380R- Food Safety and Microbiology (3)
ACBS 405- Principles of Livestock Health Management (3)
BIOC 385- Metabolic Biochemistry (3)
ECOL 320- Genetics (4)
ECOL 326- Genomics (3)
ECOL 409- Evolution of Infectious Diseases (3)
ENVS 408- Scientific Writing for Env., Ag. & Life Sciences (3)
ENVS 425- Environmental Microbiology (3)
MCB 410- Cell Biology (3)
MCB 422- Problem Solving with Genetic Tools (3)
MIC 329A- Microbial Diversity (3)

Comments

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)

COLLEGE OF AGRICULTURE, LIFE & ENVIRONMENTAL SCIENCES
Animal & Comparative Biomedical Sciences

Revised 2/2025

College of Agriculture and Life Sciences
School of Animal & Comparative Biomedical Sciences

Fall 2025	

Spring 2025	

Fall 2025	

Spring 2025	

Fall 2025	

Spring 2025	

Fall 2025	

Spring 2025	