



Wyoming Transfer Alignment Guide (WyoTAG)

Microbiology, B.S.

The Interdepartmental Microbiology B.S. degree includes basic science, microbiology core, and elective courses selected from the areas of medical, environmental, and molecular microbiology.

Degree Requirements

This degree requires 120 credits, 42 of which are upper-division credits.

University Studies Program

This degree requires that The University Studies Program 2015 requirements are met before graduation. Some of the courses required for this major fulfill USP requirements, but not all. Students should check their degree evaluations and consult with their assigned academic advisor to discuss their specific course plan.

Course Name	Credits	UW Course in Major	AA/AS/AB/ADN satisfies this USP
C 1-Communication 1 (COM1)	3		X
C 2-Communication 2 (COM2)	3		X
C 3-Communication 3 (COM3)	3	(Must be completed at UW)	
Q-Quantitative Reasoning (U5Q)	3		X
PN-Physical and Natural World (1) (U5PN)	3		X
PN-Physical and Natural World (2) (U5PN)	3		X
H-Human Culture (1) (U5H)	3		X
H-Human Culture (2) (U5H)	3		X
V-US & WY Constitution (U5V)	3		X
FYS or USP Elective-Any 3-credit hour of FYS or 3-credit hours of USP electives	3		X

Note: FYS courses have been paused. 3 hours from any additional USP designated courses is still required.

Additional Information

Microbiology majors complete the basic science requirements and microbiology core courses followed by specialization in a chosen area of microbiology via electives. The microbiology curriculum is organized to provide students with the maximum flexibility in meeting their university studies program requirements.

Course Requirements - Basic Sciences and Quantitative Reasoning: 39-41 Hours

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
MATH 1405 - Trigonometry Q Credits: 3 OR MATH 1450 - Algebra and Trigonometry Q Credits: 5 OR MATH 2200 - Calculus I Q Credits: 4	3-5	See Note 1	See Note 1	See Note 1	See Note 1	See Note 1	See Note 1	See Note 1
STAT 2050 - Fundamentals of Statistics Q	4	X	X	X	X	X	X	X
LIFE 1010 - General Biology PN	4	See Note 2	See Note 2	See Note 2	See Note 2	See Note 2	See Note 2	See Note 2
LIFE 2022 - Animal Biology OR LIFE 2023 - Biology of Plants and Fungi	4	See Note 3	See Note 3		See Note 3	See Note 3	See Note 3	See Note 3
CHEM 1020 - General Chemistry I PN	4	X	X	X	X	X	X	X
CHEM 1030 - General Chemistry II PN	4	X	X	X	X	X	X	X
CHEM 2420 - Organic Chemistry I	4	X	X	X	X	X	X	X
CHEM 2440 - Organic Chemistry II	4	X	X	X	X	X	X	X

Course Requirements - Basic Sciences and Quantitative Reasoning: 39-41 Hours Continued

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
PHYS 1110 - General Physics I PN	4	X	X	X	X	X	X	X
PHYS 1120 - General Physics II PN	4	X	X	X	X	X	X	X

MICR Core Requirement: 36-37 Hours

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
MICR/MOLB 2021 - General Microbiology OR MICR/MOLB 2240 - Medical Microbiology	4	See Note 4	See Note 4	See Note 4	See Note 4	See Note 4	See Note 4	See Note 4
PATB 2220 - Pathogenic Microbiology	3	See Note 5						

Course Name	Credits	
LIFE 3050 - Genetics	4	UW course
MOLB 3000 - Introduction to Molecular Biology	3	UW course
MOLB 3610 - Principles of Biochemistry	4	UW course
PATB/MOLB 4400 - Immunology	4	UW course
MOLB 4440 - Microbial Genetics	3	UW course
MOLB 4460 - Microbial Physiology and Metabolism	3	UW course
PATB 4710 - Medical Virology	3	UW course
MICR 4321 - Microbiology Capstone C3 OR MOLB 4053 - Communications in Molecular Biology C3	3-4	UW course

Take 2 credits total of any combination of the following 1-credit seminar courses:

Course Name	Credits	
PATB 4150 - Seminar Credits: 1 OR MOLB 4050 - Student Seminar: Topics in ____ Credits: 1 OR MOLB 4051 - Departmental Seminar Credits: 1 OR MOLB 4052 - Summer Seminar Credits: 1	2	UW course

MICR Elective Requirement: 6 Hours

In addition to completing the required microbiology courses listed above, students must complete 6 hours of microbiology electives from any of the following lists.

Medical Microbiology

Course Name	Credits	
PATB 3400 - Host Defenses Against Infect.	3	UW course
PATB 4001 - Epidemiology (Diseases in Population)	3	UW course
PATB 4110 - Diseases of Food Animals	3	UW course
PATB 4130 - Mammalian Pathobiology C3	3	UW course
PATB 4170 - Diseases of Wildlife	3	UW course
MICR 4200 - Diagnostic Bacteriology	3	UW course
PATB 4220 - Molecular Mechanisms of Bacterial Pathogenesis	3	UW course
PATB 4240 - Disease Ecology	3	UW course
MICR 4360 - Medical Entomology and Parasitology	4	UW course
PATB 4500 - Veterinary Parasitology	4	UW course

Molecular Microbiology

Course Name	Credits	
MOLB 3320 - Molecular Biological Methods	4	UW course
MOLB 4600 - Advanced Biochemistry	3	UW course
MOLB 4680 - Signaling in Host-microbe Interaction	3	UW course

Environmental and Applied Microbiology

Course Name	Credits	
MICR/MOLB/Soil 4540 - Microbial Diversity and Ecology	4	UW course
MICR 4140 - Soil Microbiology	4	UW course
BOT 4200 - Plant-Microbe Interactions	3	UW course
PLNT 3220 - Plant Pathology	3	UW course
PLNT 4000 - Plant Disease Control	3	UW course
FDSC 4090 - Food Microbiology	3	UW course
FDSC 4100 - Laboratory Techniques in Food Microbiology	1	UW course

Notes:

Note 1: All WYCCs offer both MATH 1405 and MATH 2200. MATH 1450 is offered at Casper, Sheridan, Northwest and Western.

Note 2: All WYCCs offer BIOL 1010 which is equivalent to LIFE 1010.

Note 3: LIFE 2022 is offered at Casper, CWC, LCCC, Sheridan, and Western. LIFE 2023 is offered at Casper, LCCC, Sheridan, Northwest, and Western.

Note 4: MICR 2240 is offered at LCCC. MOLB 2210 is equivalent to LIFE/MICR/MOLB 2021; MOLB 2210 is offered at Casper, CWC, EWC, Sheridan, Northwest, and Western.

Note 5: Casper offers MOLB 2220 which is equivalent to PATB 2220.

COURSE SUBSTITUTIONS: WyoTAGs reflect published equivalencies. UW academic departments occasionally arrange for course substitutions when indirect equivalencies exist. Please contact your UW Academic Advisor for details.

EFFECTIVE DATE: This document is in effect as of the 2026-2027 catalog year; it reflects the published UW curriculum as of that date. Any changes to the UW curriculum or the WYCC course equivalents will require this document to be updated. To request an updated document, faculty should contact transfer@uwyo.edu via email.