University of Wyoming Sample Four-Year Degree Plan
Catalog Year: 2018-19

Microbiology, BS

This sample degree plan is a guide, to be used for planning in consultation with your academic advisor. Actual course sequence may vary by student. A ▲ symbol identifies courses that must be taken and passed during the suggested semester in order for a student to stay on track toward completing the degree program within four years.

Sequence	Course Prefix	Course Number	Course Title	Credit Hours	Min Grade	Notes
Freshman Fall Semester						
			USP First-Year Seminar	3	C	FY
▲	CHEM	1020	General Chemistry I [1]	4	C	PN
▲	LIFE	1010	General Biology [2]	4	C	PN
	MATH	1450	Algebra and Trigonometry [3]	5	C	Q. Can substitute MATH 1400 (College Algebra)[3] and MATH 1405 (Trigonometry)[4] or
			Credit hours subtotal:	**16**		
Freshman Spring Semester						
			USP Communication 1	3	C	C1
▲	CHEM	1030	General Chemistry II	4	C	
▲	LIFE	2022	Animal Biology	4	C	Offered fall semester; can substitute LIFE 2023 (Biology of Plants & Fungi)
▲	MOLB	2021	General Microbiology	4	C	Cross listed with MICR 2021; Can substitute MOLB/MICR 2240 (Medical Microbiology)
			Credit hours subtotal:	**15**		
Sophomore Fall Semester						
			USP Communication 2	3	C	C2
			USP Human Culture	3	C	H
▲	CHEM	2420	Organic Chemistry I	4	C	
▲	LIFE	3050	Genetics	4	C	
▲	MOLB	3000	Introduction to Molecular Biology	3	C	
			Credit hours subtotal:	**17**		
Sophomore Spring Semester						
			USP US & Wyoming Constitutions	3	C	V
▲	CHEM	2440	Organic Chemistry II	4	C	
▲	PATB	2220	Pathogenic Microbiology	3	C	Cross listed with MICR 2022
	PATB	4150	Seminar	1	S	Offered S/U only; can substitute MOLB 4050 (Student Seminar) or MOLB 4052 (Summer Seminar); both courses are offered S/U only.
	STAT	2050	Fundamentals of Statistics	4	C	
			Credit hours subtotal:	**15**		

This sample degree plan is a guide for course work in the major. • Course sequencing may need to be altered if ACT or Math Placement scores require a student to take pre-college courses before taking required math or English courses. • Not all courses are offered every semester and some electives may have prerequisites. Students should review course descriptions in the *University Catalog* and consult with their academic advisor to plan accordingly.

University of Wyoming requirements:

Students must have a minimum cumulative GPA of 2.0 to graduate. • Students must complete 42 hours of upper division (3000-level or above) coursework, 30 of which must be from the University of Wyoming. • Courses must be taken for a letter grade unless offered only for S/U. • University Studies Program (USP) Human Culture (H) and Physical & Natural World (PN) courses must be taken outside of the major subject, but can be cross-listed with the major.

Microbiology Program Notes:

[1] Requires MATH ACT ≥ 23, MATH SAT ≥ 600, Math Placement Exam ≥ 3, or concurrent enrollment in MATH 1400, 1405 or 1450. (University standard)

[2] Requires MATH ACT ≥ 21, MATH SAT ≥ 600, Math Placement Exam ≥ 2, or > C in MATH 0921. (University standard)

[3] Requires MATH ACT ≥ 23, MATH SAT ≥ 600, Math Placement Exam ≥ 3, or > C in MATH 0925. (University standard)

Notes continued on next page(s).

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Junior Fall Semester						
▲	MOLB	3610	Principles of Biochemistry	4	C	Can substitute MOLB 4600 (Biochemistry I: Biomolecules) and MOLB 4610 (Biochemistry 2: Bioenergetics & Metabolism)
	PATB	4710	Medical Virology	3	C	Cross listed with MICR 4710; offered fall only
	PHYS	1110	General Physics I	4	C	
			Upper Division Elective [4]	3	C	Consult with Academic Advisor
			Credit hours subtotal:	**14**		
Junior Spring Semester						
			USP Human Culture	3	C	H
	PATB	4150	Seminar	1	S	Offered S/U only; can substitute MOLB 4050 (Student Seminar) or MOLB 4052 (Summer Seminar); both courses are offered S/U only.
	PHYS	1120	General Physics II	4	C	
			Upper Division Elective [4]	3	C	Consult with Academic Advisor
			Elective	3		
			Credit hours subtotal:	**14**		
Senior Fall Semester						
	MICR	4321	Microbiology Capstone	4	C	C3
▲	MOLB	4400	Immunology	4	C	Cross listed with PATB 4400; offered fall only
▲	MOLB	4460	Microbial Physiology	3	C	Offered fall only
			Electives	6		
			Credit hours subtotal:	**17**		
Senior Spring Semester						
	MOLB	4440	Microbial Genetics	3	C	Offered spring only
			Upper Division Electives [4]	10	C	
			Credit hours subtotal:	**13**		
			TOTAL CREDIT HOURS	**121**		

Microbiology Program Notes continued:

[4] Upper Division Electives. Students must complete at least six (6) hours of microbiology electives from among the following three (3) areas. Please consult with an academic advisor when selecting. Students may substitute additional (related) upper division electives not listed, upon approval of their advisor.

Medical Microbiology

PATB	4001	Epidemiology (Diseases/Population) (3 hrs)
PATB	4110	Disease/Food Animals & Horses (3 hrs)
PATB	4130	Mammalian Pathbiology (3 hrs)
PATB	4140	Principles of Toxicology (3 hrs)
PATB	4170	Diseases of Wildlife (3 hrs)
PATB	4200	Diagnostic Bacteriology (1 hr)
PATB	4220	Molecular Pathogenesis (3 hrs)
PATB	4500	Veterinary Parasitology (4 hrs)
PHCY	4450	Pathophysiology (4 hrs)
ZOO	4110	HIV/AIDS: Disease & Dilemma (3 hrs)

Molecular and Cell Biology

LIFE	3600	Cell Biology (4 hrs)
MOLB	4260	Quantitative Microscopy (1 hr)
MOLB	4450	Cell & Developmental Genetics (3 hrs)
MOLB	4670	Advanced Molecular Cell Biology (3 hrs)

Environmental and Applied Microbiology

FDSC	4090	Food Microbiology (3 hrs)
FDSC	4100	Lab Techniques in Food Microbiology (1hr)
MOLB	4540	Microbial Diversity & Ecology (4 hrs)
PLNT	3220	Plant Pathology (3 hrs)
PLANT	4000	Plant Disease Control (3 hrs)
SOIL	4140	Soil Microbiology (4 hrs)

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