



# ACADEMIC MAP - BIOCHEMISTRY

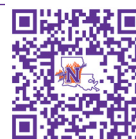
2025-2026

START HERE



NORTHWESTERN STATE  
UNIVERSITY OF LOUISIANA

Department of Physical Science  
[nsula.edu/physical-science](https://nsula.edu/physical-science)



YEAR 1	SEMESTER 1	Milestones	Grade	Credits	Minimum Grade	Electives	Credits
	CHEM 1030 – General Chemistry 1			3	C	Concentration	
	CHEM 1031 – General Chemistry Laboratory 1			1	C	Science	
	MATH 1100 – Precalculus Mathematics			6		Academic	
	ENGL 1010 – Composition & Rhetoric 1			3			
	UNIV 1000 – The University Experience			1			

Semester Credits \_\_\_\_\_

SEMESTER 2	Milestones	Grade	Credits	Minimum Grade	Electives	Credits
CHEM 1040 – General Chemistry 2			3	C	Concentration	
CHEM 1041 – General Chemistry Laboratory 2			1	C	Science	
MATH 2100 – Analytical Geometry & Calculus 1			5	C	Academic	
BIOL 1010 – Biology Principles 1			3	C		
BIOL 1011 – Biology Principles Laboratory 1			1	C		
ENGL 1020 – Composition & Rhetoric 2			3			

Semester Credits \_\_\_\_\_

Total Credits \_\_\_\_\_

YEAR 2	SEMESTER 1	Milestones	Grade	Credits	Minimum Grade	Electives	Credits
	CHEM 3010 – Organic Chemistry 1			3	C	Concentration	
	CHEM 3011 – Organic Chemistry Laboratory 1			1	C	Science	
	BIOL 1020 – Biology Principles 2			3	C	Academic	
	BIOL 1021 – Biology Principles Laboratory 2			1	C		
	MATH 2110 – Analytical Geometry & Calculus 2			5	C		

Semester Credits \_\_\_\_\_

Total Credits \_\_\_\_\_

SEMESTER 2	Milestones	Grade	Credits	Minimum Grade	Electives	Credits
CHEM 3020 – Organic Chemistry 2			3	C	Concentration	
CHEM 3021 – Organic Chemistry Laboratory 1			1	C	Science	
PHYS 2510 – General Analytical Physics 1			3	C	Academic	
PHYS 2511 – General Analytical Physics Laboratory 1			1	C		
ENGL 2110 – Introduction to Literature			3			
COMM 1010 or COMM 2500			3			

Semester Credits \_\_\_\_\_

Total Credits \_\_\_\_\_

YEAR 3	SEMESTER 1	Milestones	Grade	Credits	Minimum Grade	Electives	Credits
	PHYS 2520 – General Analytical Physics 2			3	C	Concentration	
	PHYS 2521 – General Analytical Physics Laboratory 2			1	C	Science	
	BIOL 2060 – Microbiology 1			3	C	Academic	
	BIOL 2061 – Microbiology Laboratory 1			1	C		
	CHEM 2110 – Quantitative Analysis			3	C		
	CHEM 2111 – Quantitative Analysis Laboratory			1	C		
	CHEM 4040 – Biochemistry 1			3	C		
	CHEM 4041 – Biochemistry Laboratory 1			1	C		

Semester Credits \_\_\_\_\_

Total Credits \_\_\_\_\_

SEMESTER 2	Milestones	Grade	Credits	Minimum Grade	Electives	Credits
CHEM 2140 – Inorganic Chemistry			3	C	Concentration	
BIOL 3250 – Cell Biology			3	C	Science	
CHEM 4050 – Biochemistry 2			3	C	Academic	
FA 1040 – Exploring The Arts			3			
HIST 1010, HIST 1020, HIST 2010, or HIST 2020			3			



- Apply to graduate school(s).

- Verify requirements for schools of your choice.

Semester Credits \_\_\_\_\_

Total Credits \_\_\_\_\_

YEAR 4	SEMESTER 1	Milestones	Grade	Credits	Minimum Grade	Electives	Credits
	CHEM 3210 – Chemical Thermodynamics			3	C	Concentration	
	CHEM 4910 – Capstone Course in Chemistry			3	C	Science	
	BIOL 3270 – Genetics			3	C	Academic	
	BIOL 3271 – Genetics Laboratory			1	C		
	Electives – See the list on next page			3			
	PSYC 1010, PSYC 2050, SOC 1010, or EPSY 2020			3			

Semester Credits \_\_\_\_\_

Total Credits \_\_\_\_\_

SEMESTER 2	Milestones	Grade	Credits	Minimum Grade	Electives	Credits
CHEM 4920 – Scientific Communication			3	C	Concentration	40
BIOL 4300 – Molecular Biology			3	C	Science	4
BIOL 4301 – Molecular Biology Laboratory			1	C	Academic	11
GEOG 1010, ANTH 1510, ECON 2000, PSCI 2010, or PHIL 1010			3			
Electives – See the list on next page			5			

Semester Credits \_\_\_\_\_

Total Credits 120

YOU'VE FINISHED!



Milestone

Should be taken in order to stay on track for graduation and professional school readiness.



Biochemistry elective

This is for biochemistry concentration, for other concentration or majors, consult with your advisor for any suggested changes.



Science elective



## GRADUATION REQUIREMENTS

Semester = 120, Physical Sciences = 30, Biochemistry Concentration = 40, Science Electives = 4, Academic Electives = 11

Courses taken outside of a student's degree program are not eligible for Title IV federal financial aid (grants and loans). However, elective courses are eligible for Title IV aid if they are required and included in the student's program of study. Once a student has completed all required elective credits, any additional elective courses taken beyond the program's requirements will not be eligible for Title IV funding.



List of Science Electives	Number of credits
BIOL 2090 – Microbiology 2	3
BIOL 2091 – Microbiology 2 Laboratory	1
BIOL 3060 - Biostatistics	3
BIOL 3061 – Biostatistics Laboratory	1
BIOL 3170 – Histology	3
BIOL 3171 – Histology Laboratory	1
BIOL 3310 – Anatomy and Physiology 1	3
BIOL 3311 – Anatomy and Physiology Laboratory 1	1
BIOL 3320 – Anatomy and Physiology 2	3
BIOL 3321 – Anatomy and Physiology Laboratory 2	1
BIOL 4060 – Embryology	3
BIOL 4061 – Embryology Laboratory	1
BIOL 4070 – Cardiovascular Physiology	3
BIOL 4190 – Immunology	3
BIOL 4270 – Virology	3
BIOL 4320 – Cancer Biology	3
BIOL 4930 – Microbial Physiology	3
CHEM 2120 – Instrumental Analysis	3
CHEM 2121 – Instrumental Analysis Laboratory	1
CHEM 3100 – Medicinal Chemistry	3
CHEM 3220 – Physical Chemistry 2	3
CHEM 3900 – Forensic Toxicology	3
CHEM 4950 – Research Problems in Chemistry	1
MATH 1100 – Precalculus Mathematics	6
MATH 2050 – Math of Statistics	3
MATH 3130 – Analytical Geometry and Calculus 3	3

- **Science electives:** Students may select any course from Physics, Chemistry, Mathematics, or Biology.
- **Academic Electives:** Students are limited to a maximum of 6 hours of 1000-level courses.