



# ACADEMIC MAP - BIOCHEMISTRY

2025-2026



NORTHWESTERN STATE  
UNIVERSITY OF LOUISIANA

Department of Physical Science  
nsula.edu/physical-science



**START HERE**

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

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

SEMESTER 2					Electives Credits	
Milestones	Grade	Credits	Minimum Grade	Concentration	Credits	
CHEM 1040 – General Chemistry 2			3	C		
CHEM 1041 – General Chemistry Laboratory 2			1	C		
MATH 2100 – Analytical Geometry & Calculus 1			5	C		
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					Electives Credits	
	Milestones	Grade	Credits	Minimum Grade	Concentration	Credits	
	CHEM 3010 – Organic Chemistry 1			3	C		
	CHEM 3011 – Organic Chemistry Laboratory 1			1	C		
	BIOL 1020 – Biology Principles 2			3	C		
	BIOL 1021 – Biology Principles Laboratory 2			1	C		
MATH 2110 – Analytical Geometry & Calculus 2			5	C			

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

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

SEMESTER 2					Electives Credits	
Milestones	Grade	Credits	Minimum Grade	Concentration	Credits	
CHEM 3020 – Organic Chemistry 2			3	C		
CHEM 3021 – Organic Chemistry Laboratory 1			1	C		
PHYS 2510 – General Analytical Physics 1			3	C		
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					Electives Credits	
	Milestones	Grade	Credits	Minimum Grade	Concentration	Credits	
	PHYS 2520 – General Analytical Physics 2			3	C		
	PHYS 2521 – General Analytical Physics Laboratory 2			1	C		
	BIOL 2060 – Microbiology 1			3	C		
	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					Electives Credits	
Milestones	Grade	Credits	Minimum Grade	Concentration	Credits	
CHEM 2140 – Inorganic Chemistry			3	C		
BIOL 3250 – Cell Biology			3	C		
CHEM 4050 – Biochemistry 2			3	C		
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					Electives Credits	
	Milestones	Grade	Credits	Minimum Grade	Concentration	Credits	
	CHEM 3210 – Chemical Thermodynamics			3	C		
	CHEM 4910 – Capstone Course in Chemistry			3	C		
	BIOL 3270 – Genetics			3	C		
	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					Electives Credits	
Milestones	Grade	Credits	Minimum Grade	Concentration	Credits	
CHEM 4920 – Scientific Communication			3	C	40	
BIOL 4300 – Molecular Biology			3	C	4	
BIOL 4301 – Molecular Biology Laboratory			1	C	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

Science elective

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



## GRADUATION REQUIREMENTS

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



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.