



ACADEMIC MAP - PHYSICS

2025-2026



NORTHWESTERN STATE
UNIVERSITY OF LOUISIANA

Department of Physical Science
nsula.edu/physical-science



START HERE

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
PHYS 2510 – General Analytical Physics 1						3	C	Concentration	
PHYS 2511 – General Analytical Physics Laboratory 1						1	C	Science	
MATH 2100 – Analytical Geometry & Calculus 1						5		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
	PHYS 2520 – General Analytical Physics 2						3	C	Concentration	
	PHYS 2521 – General Analytical Physics Laboratory 2						1	C	Science	
	PHYS 3400 – Minicomputer Interfacing with Scientific Instrumentation						3	C	Academic	
	PHYS 3510 – Numerical Simulations in Physics						3	C		
	MATH 2110 – Analytical Geometry & Calculus 2						5			

Semester Credits _____

Total Credits _____

SEMESTER 2				Milestones	Grade	Credits	Minimum Grade	Electives	Credits
PHYS 4510 – Mechanics						4	C	Concentration	
CHEM 1040 – General Chemistry 2						3	C	Science	
CHEM 1041 – General Chemistry Laboratory 2						1	C	Academic	
MATH 3130 – Analytical Geometry & Calculus 3						3	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 3010 – Electromagnetism & Nonlinear Optics						3	C	Concentration	
	PHYS 3011 – Electromagnetism & Nonlinear Optics Laboratory						1	C	Science	
	PHYS 4100 – Modern Physics						3	C	Academic	
	MATH 3160 – Ordinary Differential Equations						3	C		
	BIOL 1020 – Biology Principles 2						3	C		

Semester Credits _____

Total Credits _____

SEMESTER 2				Milestones	Grade	Credits	Minimum Grade	Electives	Credits
PHYS 3291 – Computational Condensed Matter						3	C	Concentration	
PHYS 3710 – Thermodynamics & Statistical Mechanics						3	C	Science	
CHEM 3210 – Chemical Thermodynamics						3		Academic	
Electives – See the list below						3			
HIST 1010, HIST 1020, HIST 2010, or HIST 2020 –						3			

Semester Credits _____

Total Credits _____



- Apply to graduate school(s).

- Verify requirements for schools of your choice.

YEAR 4	SEMESTER 1				Milestones	Grade	Credits	Minimum Grade	Electives	Credits
	PHYS 4520 – Quantum Mechanics in Physics						3	C	Concentration	
	PHYS 4930 – Capstone Course in Physics						3	C	Science	
	Electives – See the list below						3		Academic	
	GEOG 1010, ANTH 1510, ECON 2000, PSCI 2010, or PHIL 1010 –						3			
	PSYC 1010, PSYC 2050, SOC 1010, or EPSY 2020 –						3			

Semester Credits _____

Total Credits _____

SEMESTER 2				Milestones	Grade	Credits	Minimum Grade	Electives	Credits
PHYS 4940 – Scientific Communication						3	C	Concentration	35
CHEM 3220 – Chemical Kinetic & Quantum Mechanics						3	C	Science	9
FA 1040 – Exploring The Arts						3		Academic	11
Electives – See the list below						5			

Semester Credits _____

Total Credits **120**



Milestone

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



Physics Course

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



Physical Science Course



GRADUATION REQUIREMENTS

Semester = 120, Physical Sciences = 30, Physics Concentration = 35, Science Electives = 9, 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 Electives	Number of credits
PHYS 3900 – Special Topics in Physics	1
CHEM 2110 - Quantitative Analysis	3
CHEM 2111 - Quantitative Analysis Laboratory	1
CHEM 2120 - Introduction to Instrumental Analysis	3
CHEM 2121 - Introduction to Instrumental Analysis Laboratory	1
CHEM 2140 - Inorganic Chemistry	3
CHEM 2141 - Inorganic Chemistry Laboratory	1
CHEM 3210 – Chemical Thermodynamics	3
CHEM 3221 - Physical Chemistry Laboratory	2
MATH 1100 – Precalculus Mathematics	6
BIOL 3060 - Biostatistics	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.