# Chemistry

Degree Type Bachelor of Science Objective:

This major is designed for the student who has goals of pursuing academic research or professional service in fields closely related to chemistry. This program of study fulfills most admission requirements for graduate school, although students should make sure that course work covers any expectations for specific programs.

Administrator: Chair, Department of Chemistry

**Requirements :** A total of at least 59-65 credits in science and math, including at least 30 credits in chemistry.

#### **Chemistry Core Courses:**

em # Title		Credits	
CHEM2210	General Chemistry I	3	
CHEM2210L	General Chemistry I Laboratory	1	
CHEM2220	General Chemistry II	3	
CHEM2220L	General Chemistry II Laboratory	1	
CHEM2610	Analytical Chemistry	3	
CHEM2610L	Analytical Chemistry Laboratory	1	
CHEM3210	Organic Chemistry I	3	
CHEM3210L	Organic Chemistry I Laboratory	1	
CHEM3220	Organic Chemistry II	3	
CHEM3220L	Organic Chemistry II Laboratory	1	
CHEM3310	Inorganic Chemistry	3	
CHEM3510	Thermodynamics and Kinetics	3	
CHEM3620	Integrated Laboratory I	1	
CHEM4610	Integrated Laboratory II	1	
CHEM4710	Structure Elucidation	3	
CHEM4970	Research	1-6	
CHEM4980	Senior Seminar/Capstone	1	
MATH2510	Calculus I	4	
PHYS2110	Physics for Science and Engineering I	3	
PHYS2110L	Physics for Science and Engineering I Laboratory	1	
PHYS2120	Physics for Science and Engineering II	3	
PHYS2120L	Physics for Science and Engineering II Laboratory	1	

<u>CHEM4970</u>: A minimum of one credit is required, but a maximum of six credits in CHEM4970 will be allowed toward the major.

<u>CHEM4980</u>: must be taken at Northwest Nazarene University.

### **Chemistry Concentration: 13-14 credits**

ltem #	Title	Credits
MATH2520	Calculus II	4
MATH3540	Differential Equations	4
PHYS4810	Fundamentals of Quantum Mechanics	3

### Choose one of the following:

ltem #	Title	Credits
	BIOL4410 and BIOL4410L	4
CHEM4720	Advanced Organic Chemistry	3
PHYS4720	Solid State Physics	3

In addition to the above requirements, the student will be required to successfully pass an oral examination or a written subject examination in the field of chemistry.

## Accelerated Master of Engineering Pathway

NNU undergraduate students wishing to begin coursework toward a Master of Science degree the final year of their bachelor's degree program have the following options. NNU in collaboration with Boise State University (BSU), works with its students to apply for an accelerated master's degree program at BSU. This accelerated program gives bachelor's degree students a "fast-track" option to pursue their Master of Science degree at BSU. Upon successful completion of this 4+1 model, the student will have earned a Bachelor of Science degree from NNU and the potential of completing BSU's Master of Science (MS) in Computer Science, in Materials Science and Engineering, in Mechanical Engineering, in Electrical and Computer Engineering, or in Electrical and Computer Engineering with a semiconductor emphasis.

Prior to their final year in their bachelor's program, NNU students must apply by April 30 for admission to BSU's Accelerated Master of Science program. Students must also apply to NNU's graduate program as a non-degree seeking student.

Students who have been accepted into the BSU program will be able to apply two NNU graduate courses to the BSU Master of Science degree as well as their NNU Bachelor of Science degree. Students admitted into NNU's graduate program may choose to take additional 4000-level courses at the 5000-level.

Bachelor of Science in Engineering Course	s CR	Approved Graduate Level Courses	CR
CHEM3310 Inorganic Chemistry	3	CHEM5310 Inorganic Chemistry	3
CHEM3510 Thermodynamics and Kinetics	3	CHEM5510 Thermodynamics and Kinetics	3
Total	Cre	dits	

59-65