

BACHELOR OF SCIENCE IN CHEMISTRY

Web Site: <https://twu.edu/chemistry-biochemistry/undergraduate-programs/bs-in-chemistry/>

Degree Requirements

Total Semester Credit Hours (SCH): 124

Major: 51 SCH

Program Code: CHEMISTRY.BS **CIP Code:** 40.0501.00

This flexible degree plan combines a liberal arts education with a concentration in chemistry. Our undergraduate chemistry program will allow you to major in chemistry while also pursuing a specialization in an almost unlimited number of other areas, such as business, journalism, biology, mathematics, nutrition, or computer science.

Texas Core Curriculum

Code	Title	SCHs
ENG 1013	Composition I (10)	3
ENG 1023	Composition II (10)	3
Mathematics (20)		3
Life & Physical Sciences (30)		6
Language, Philosophy, & Culture (40)		3
Creative Arts (50)		3
HIST 1013	History of the United States, 1492-1865 (60)	3
HIST 1023	History of the United States, 1865 to the Present (60)	3
POLS 2013	U.S. National Government (70)	3
POLS 2023	Texas Government (70)	3
Social & Behavioral Sciences (80)		3
CAO: Multicultural-Women's Studies (90)		3
CAO: First Year Seminar, Wellness or Mathematics (91)		3
Total SCHs		42

Courses Required for Major

Code	Title	SCHs
CHEM 1001	Horizons of Chemistry and Biochemistry I: Career Possibilities	1
CHEM 1101	Horizons of Chemistry and Biochemistry II: Current Applications	1
CHEM 1213 & CHEM 1211	Principles of Chemistry I and Principles of Chemistry Laboratory I	4
CHEM 1223 & CHEM 1221	Principles of Chemistry II and Principles of Chemistry Laboratory II	4
CHEM 2213 & CHEM 2211	Organic Chemistry I and Organic Chemistry Laboratory I	4
CHEM 3223 & CHEM 3221	Organic Chemistry II and Organic Chemistry Laboratory II	4
CHEM 3413 & CHEM 3411	Physical Chemistry I and Physical Chemistry Laboratory I	4

CHEM 3333 & CHEM 3331	Quantitative Chemical Analysis and Quantitative Chemical Analysis Laboratory	4
CHEM 3423 & CHEM 3421	Physical Chemistry II and Physical Chemistry Laboratory II	4
CHEM 3633 & CHEM 3632	Biochemistry I and Biochemistry I Laboratory	5
CHEM 3643	Biochemistry II	3
CHEM 3713 & CHEM 3711	Environmental Chemistry I and Environmental Chemistry Laboratory I	4
CHEM 4001	Research Presentations in Chemistry and Biochemistry	1
CHEM 4313 & CHEM 4311	Instrumental Analysis and Instrumental Analysis Laboratory	4
CHEM 4513 & CHEM 4511	Inorganic Chemistry and Inorganic Chemistry Laboratory	4
Total SCHs		51

Departmental Requirements

Code	Title	SCHs
MATH 2014	Calculus I (may be applied from core)	4
MATH 2024	Calculus II	4
PHYS 2153 & PHYS 2151	General Physics I and General Physics Laboratory I (may be applied from core)	4
PHYS 2163 & PHYS 2161	General Physics II and General Physics Laboratory II (may be applied from core)	4
Total SCHs		16

Electives

Code	Title	SCHs
Choose 15 SCH not already taken		15
CHEM 4983	Undergraduate Research	
CHEM 4913	Independent Study	
MATH 3063	Linear Algebra	
MATH 3073	Matrix Methods	
MATH 3104	Calculus III	
MATH 3123	Differential Equations	
MATH 4013	Probability and Statistics	
BIOL 1113 & BIOL 1111	Principles of Biology I and Principles of Biology I Laboratory	
BIOL 1123 & BIOL 1121	Principles of Biology II and Principles of Biology II Laboratory	
BIOL 4223 & BIOL 4221	Ecology and Ecology Laboratory	
BIOL 4813 & BIOL 4811	Molecular and Cellular Biology: Gene Expression and Molecular and Cellular Biology: Gene Expression Laboratory	
BIOL 4823 & BIOL 4821	Molecular and Cellular Biology: Genetics and Inheritance and Molecular and Cellular Biology: Genetics and Inheritance Laboratory	
Total SCHs		15