

ACCELERATED BACHELOR OF SCIENCE IN CHEMISTRY/ MASTER OF SCIENCE IN CHEMISTRY

This program will provide strong, qualified undergraduates an avenue to accelerate their time to the MS degree. The program allows undergraduates to begin taking graduate-level courses after completing 90 credit hours toward their baccalaureate degree, but no undergraduate course may count toward the accelerated Master's degree. This accelerated program is also a financial and time-saving degree plan.

Marketable Skills

Marketable skills prepare students for success in a variety of professional settings. Developed through academic coursework, co-curricular engagement, and extracurricular involvement, these skills include communication, critical thinking, teamwork, ethical reasoning, adaptability, and digital literacy. Whether directly related to a student's major or serving as complementary strengths, marketable skills enhance career readiness and reflect TWU's commitment to producing graduates who are prepared to thrive in today's dynamic workforce.

Possessing a Master's degree in Chemistry will meet a job market that increasingly demands advanced education. Jobs for individuals with Master's degrees in Chemistry include positions in the private sector, such as the pharmaceutical industry, analysis labs, quality control, R&D, and the energy sector (both renewables and oil & gas).

Admissions

Admission Requirements

To apply to the Accelerated Bachelor's to Master's program in Chemistry, students must:

- Be currently enrolled as a TWU Chemistry major.
- Have a minimum cumulative grade point average of 3.0 or higher.
- Have successfully completed a minimum of 72 but no more than 90 hours of coursework toward the bachelor's.
- Have a minimum of 12 hours remaining in chemistry courses toward the major.

How to Apply to the Accelerated Program

To apply, students must:

1. Receive approval from the Division Lead.
2. Once admitted to the Accelerated Program students must apply to the graduate M.S. in Chemistry program (<https://twu.edu/chemistry-biochemistry/graduate-program/>). Students cannot enroll in graduate-level coursework until accepted by the Graduate School.

Accelerated Undergraduate-Graduate Program Policy Guidelines

Students may apply to an approved accelerated degree program once they have completed at least 60 undergraduate semester credit hours. Upon admission to an accelerated program, students may enroll in graduate courses for credit once they have attained at least 72

undergraduate semester credit hours. Approved courses will apply to both an undergraduate and a graduate degree.

Conditions

- Up to 12 SCH of designated graduate courses may apply to both the Bachelor's degree and a Master's degree program comprised of 45 or fewer SCH; and up to 15 graduate SCH may apply toward both an undergraduate degree and a graduate degree program comprised of more than 45 SCH (Master's, Specialist or Doctoral degree.)
- Undergraduate students may enroll in no more than 6 SCH of graduate coursework in each semester or term.
- No undergraduate-level course may count toward a graduate degree.
- Minimal criteria for admission will include a cumulative undergraduate GPA of at least 3.0. Academic components may set higher requirements for their program.
- Once admitted to an accelerated program, students must maintain a 3.0 GPA throughout the remainder of their baccalaureate degree, or their admission to the accelerated graduate program may be revoked. Academic components may set additional requirements for their programs.
- Prior to applying to an accelerated degree program, students must have completed a minimum of 15 semester credit hours at Texas Woman's University.

Graduate Application Process

All students must meet the University requirements as outlined in the Admission to the TWU Graduate School (<https://catalog.twu.edu/graduate/graduate-school/admission-graduate-school/>) section of the catalog.

This academic program may have additional graduate admission criteria that must also be completed as outlined on the graduate program's website.

Degree Requirements

Total Semester Credit Hours (SCH): 120

Major: 48 SCH

Program Code: CIP Code: 40.0501.00

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 3423 & CHEM 3421	Physical Chemistry II and Physical Chemistry Laboratory II	4
CHEM 3333 & CHEM 3331	Quantitative Chemical Analysis and Quantitative Chemical Analysis Laboratory	4
CHEM 3713 & CHEM 3711	Environmental Chemistry I and Environmental Chemistry Laboratory I	4
CHEM 4001	Research Presentations in Chemistry and Biochemistry	1
CHEM 4311	Instrumental Analysis Laboratory	1
CHEM 5323	Advanced Analytical Chemistry	3
CHEM 4511	Inorganic Chemistry Laboratory	1
CHEM 5523	Advanced Inorganic Chemistry	3
Total SCHs		43

Departmental Requirements

Code	Title	SCHs
MATH 2014	Calculus I	4
MATH 2024	Calculus II	4
PHYS 2153 & PHYS 2151	General Physics I and General Physics Laboratory I	4
PHYS 2163 & PHYS 2161	General Physics II and General Physics Laboratory II	4
Total SCHs		16

Electives (Choose 14 SCH not already taken)

Code	Title	SCHs
CHEM 3643	Biochemistry II	3
CHEM 4981	Undergraduate Research	1
CHEM 4983	Undergraduate Research	3
CHEM 5013	Advanced Physical Chemistry	3
CHEM 5213	Advanced Organic Chemistry	3
CHEM 5903	Special Topics (Advanced Biochemistry Pre-Requisite 3643)	3
CHEM 5903	Special Topics	3
Total SCHs		19

Plan of Study

First Year		TCCN	SCHs
Fall			
CHEM 1001	Horizons of Chemistry and Biochemistry I: Career Possibilities		1
CHEM 1213 & CHEM 1211	Principles of Chemistry I and Principles of Chemistry Laboratory I		4
MATH 2014	Calculus I	MATH 2413	4
ENG 1013	Composition I	ENGL 1301	3
UNIV 1231	Learning Frameworks: the First-Year Seminar	EDUC 1100, EDUC 1200, EDUC 1300	1
Wellness/Mathematics CAO Core			2
SCHs			15
Spring		TCCN	
CHEM 1101	Horizons of Chemistry and Biochemistry II: Current Applications		1
CHEM 1223 & CHEM 1221	Principles of Chemistry II and Principles of Chemistry Laboratory II		4
MATH 2024	Calculus II	MATH 2414	4
ENG 1023	Composition II	ENGL 1302	3
Multicultural Women's Studies CAO Core			3
SCHs			15
Second Year			
Fall		TCCN	
CHEM 2213 & CHEM 2211	Organic Chemistry I and Organic Chemistry Laboratory I	CHEM 2323 & CHEM 2123	4
PHYS 2153 & PHYS 2151	General Physics I and General Physics Laboratory I	PHYS 2325 & PHYS 2125	4
POLS 2013	U.S. National Government Language, Philosophy, & Culture	GOVT 2305	3
SCHs			14
Spring		TCCN	
CHEM 3223 & CHEM 3221	Organic Chemistry II and Organic Chemistry Laboratory II		4
PHYS 2163 & PHYS 2161	General Physics II and General Physics Laboratory II	PHYS 2326 & PHYS 2126	4
POLS 2023	Texas Government	GOVT 2306	3
CHEM 3333 & CHEM 3331	Quantitative Chemical Analysis and Quantitative Chemical Analysis Laboratory		4
SCHs			15
Third Year			
Fall		TCCN	
CHEM 3413 & CHEM 3411	Physical Chemistry I and Physical Chemistry Laboratory I		4
CHEM 3633 & CHEM 3632	Biochemistry I and Biochemistry I Laboratory		5
Social and Behavioral Core			3

CHEM 4313 Instrumental Analysis & CHEM 4311 and Instrumental Analysis Laboratory (OR: CHEM 4513/4511)		4
SCHs		16
Spring	TCCN	
CHEM 3423 Physical Chemistry II & CHEM 3421 and Physical Chemistry Laboratory II		4
CHEM 3643 Biochemistry II		3
CHEM 4983 Undergraduate Research		3
Elective (Global Perspective)		3
SCHs		13
Fourth Year		
Fall	TCCN	
CHEM 4983 Undergraduate Research		3
Creative Arts Core		3
HIST 1013 History of the United States, 1492-1865	HIST 1301	3
CHEM 5523 Advanced Inorganic Chemistry & CHEM 4511 and Inorganic Chemistry Laboratory		4
CHEM 5323 Advanced Analytical Chemistry & CHEM 4311 and Instrumental Analysis Laboratory		4
SCHs		17
Spring	TCCN	
CHEM 4001 Research Presentations in Chemistry and Biochemistry		1
CHEM 3713 Environmental Chemistry I & CHEM 3711 and Environmental Chemistry Laboratory I		4
HIST 1023 History of the United States, 1865 to the Present	HIST 1302	3
Elective		3
Elective		4
SCHs		15
Total SCHs:		120