

MASTER OF SCIENCE IN CHEMISTRY (BUSINESS)

Web Site: <https://twu.edu/chemistry-biochemistry/graduate-program/>

This degree plan is ideal for those wishing to move up the administrative ladder in a pharmaceutical or chemical company.

We offer the M.S. degree in chemistry with research focuses in biochemistry, biophysical chemistry, organic chemistry, and inorganic/materials chemistry. A course of study and research will be custom-designed by a faculty committee to suit your individual research interests and career goals.

As a master's degree-seeking student, you will be required to take a minimum of four basic chemistry courses in order to establish a strong foundation in the field. You will then be encouraged to take analytical, biological, inorganic, organic, and/or physical chemistry advanced graduate courses to gain more in-depth perspectives. There are two pathways to our master's degree: a research path, or a coursework path with a science or business track emphasis.

Marketable Skills

Defined by the Texas Higher Education Coordinating Board's 60x30 Strategic Plan (<https://reportcenter.highered.texas.gov/agency-publication/miscellaneous/the60x30-strategic-plan/>) as, "Those skills valued by employers that can be applied in a variety of work settings, including interpersonal, cognitive, and applied skills areas. These skills can be either primary or complementary to a major and are acquired by students through education, including curricular, co-curricular, and extracurricular activities."

1. As a member of a graduate teaching lab team and research team, you will learn how to work and communicate with diverse team members.
2. By writing laboratory reports, papers, and a thesis, coupled with presenting your work to your peers, at conferences, or to the general public, you will gain valuable verbal and written communication skills.
3. With our departmental focus on civic engagement and laboratory safety as our first priority, you will understand social and personal responsibility.
4. Finally, since earning a degree in any field of chemistry naturally requires excellent problem-solving and critical-thinking skills related to chemistry, these skills can also be used to address other issues and solve other problems.

Admissions

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.

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

Degree Requirements

Total Semester Credit Hours Required

36 semester credit hours (SCH).

Required Courses

16-17 SCH of chemistry coursework (excluding research, seminar, professional paper, and thesis) approved by an advisory committee. Business coursework track students must enroll in CHEM 5101 a minimum of two times. It is recommended students enroll in CHEM 5101 each semester if taking six or more SCH.

All students in the course work with business track must complete five basic chemistry courses for a total of 15 SCH and at least twelve semester credit hours of coursework from the College of Business. The remaining graduate courses in chemistry, biology, and in the College of Business may be taken upon the approval of their advisor. Up to six SCH may be from Research in Chemistry. In the first year of studies, coursework track students must choose an advisor. In the last semester of study, students must register for CHEM 5973 where students will write a paper and defend it to their committee.

Business Track

Code	Title	SCHs
Required Chemistry Courses (17 SCH)		
CHEM 5101	Seminar (take a minimum of 2 times)	2
Select 15 SCH from the following		15
CHEM 5013	Advanced Physical Chemistry	
CHEM 5213	Advanced Organic Chemistry	
CHEM 5323	Advanced Analytical Chemistry	
CHEM 5523	Advanced Inorganic Chemistry	
CHEM 5613	Advanced Biochemistry I	
CHEM 5623	Advanced Biochemistry II	
Business Coursework		
12 SCH of business courses from the list below.		12
BUS 5933	Business Ethics and Legal Environment	
BUS 5903	Special Topics	
BUS 5913	Independent Study	
BUS 5923	Global Business	
BUS 5393	Leading High Performing Teams	
BUS 5013	Foundations in Business	
Other courses as approved by advisor.		
Electives		
Select 5 SCH from the following		4
CHEM 5101	Seminar (may be repeated)	
CHEM 5891	Research in Chemistry (may be repeated)	
CHEM 5893	Research in Chemistry (may be repeated)	
CHEM 5896	Research in Chemistry	
Other courses as approved by advisor.		
Completion of Track		
CHEM 5973	Professional Paper	3
Total SCHs		36

Final Examination

All candidates for master's degrees must pass a final oral examination administered by the student's research committee.