Bachelor of Science in Chemistry

About This Program

The Bachelor of Science in Chemistry meets the standards for professional baccalaureate programs established by the American Chemical Society. It is recommended to students who plan to enter into graduate study in chemistry and for those who anticipate professional careers as chemists.

Competencies

1. Students will gain knowledge of an essential core of knowledge in chemistry, including organic, inorganic, physical, and biochemistry.
2. Students will communicate, both orally and in writing, chemical topics relevant to their field of interest.
3. Students will be able to read and analyze scientific papers in their area of interest.
4. Students will obtain standard laboratory skills and techniques that are relevant to the study of all areas of chemistry.
5. Students will gain fundamental knowledge of theory and operation of modern chemical instrumentation.

Curriculum

Foundations		
General Core Requirements (https://catalog.uta.edu/academicregulations/degreerequirements/generalcorerequirements/)		42
Students must complete specific courses within certain core areas		
For Communication, select:		
ENGL 1301	RHETORIC AND COMPOSITION I	
ENGL 1302	RHETORIC AND COMPOSITION II	
For Mathematics, select:		
MATH 1426	CALCULUS I	
MATH 2425	CALCULUS II	
For Life and Physical Science, select:		
PHYS 1443	GENERAL TECHNICAL PHYSICS I	
PHYS 1444	GENERAL TECHNICAL PHYSICS II	
For U.S. History, select:		
HIST 1301	HISTORY OF THE UNITED STATES TO 1865	
HIST 1302	HISTORY OF THE UNITED STATES, 1865 TO PRESENT	
Chemistry Foundations		
Additional hours required in core.		4
CHEM 1101	SUCCESS IN CHEMISTRY AND BIOCHEMISTRY	1
MATH 2326	CALCULUS III	3
MATH 3319	DIFFERENTIAL EQUATIONS & LINEAR ALGEBRA	3
or MATH 3318	DIFFERENTIAL EQUATIONS	
PHYS 3313	INTRODUCTION TO MODERN PHYSICS	3
Biology or Geology for science majors courses.		8
Chemistry Specialization		
CHEM 1341	GENERAL CHEMISTRY I	3
CHEM 1181	GENERAL CHEMISTRY I LABORATORY FOR ADVANCED CHEMICAL TECHNOLOGIES	1
CHEM 1342	GENERAL CHEMISTRY II	3
CHEM 1182	GENERAL CHEMISTRY II LABORATORY FOR ADVANCED CHEMICAL TECHNOLOGIES	1
CHEM 2321	ORGANIC CHEMISTRY I	3
CHEM 2322	ORGANIC CHEMISTRY II	3
CHEM 2335	QUANTITATIVE CHEMISTRY	3
CHEM 2283	SYNTHESIS AND ANALYSIS LABORATORY I	2
CHEM 2284	SYNTHESIS AND ANALYSIS LABORATORY II	2
CHEM 3321	PHYSICAL CHEMISTRY I	3
CHEM 3181	PHYSICAL CHEMISTRY I LABORATORY	1
CHEM 3322	PHYSICAL CHEMISTRY II	3
CHEM 3182	PHYSICAL CHEMISTRY II LABORATORY	1

CHEM 3317	INORGANIC CHEMISTRY	3
CHEM 4101	SEMINAR IN CHEMISTRY	1
CHEM 4311	BIOCHEMISTRY I	3
CHEM 4318	INORGANIC CHEMISTRY	3
CHEM 4346	ADVANCED SYNTHETIC METHODS	3
CHEM 4461	INSTRUMENTAL ANALYSIS	4
CHEM 3000- or 4000-level course approved by the undergraduate advisor.		3
Computer proficiency waived by grade of C or better in CHEM 2335.		
Advanced electives at the 3000 or 4000 level sufficient to meet the 36 advanced hours requirement.		2
Electives sufficient to complete the total hours required for the degree.		5
Total Hours		**120**

SUGGESTED COURSE SEQUENCE

First Year

First Semester	Hours	Second Semester	Hours
CHEM 1341	3	CHEM 1342	3
CHEM 1181	1	CHEM 1182	1
MATH 1426	4	MATH 2425	4
ENGL 1301	3	ENGL 1302	3
BIOL 1441 or GEOL 1301	4	BIOL 1442 or GEOL 1302	4
CHEM 1101	1		
	16		**15**

Second Year

First Semester	Hours	Second Semester	Hours
CHEM 2321	3	CHEM 2322	3
CHEM 2335	3	PHYS 1444	4
CHEM 2283	2	CHEM 2284	2
MATH 2326	3	MATH 3319 or 3318	3
PHYS 1443	4	Language, Philosophy, and Culture	3
	15		**15**

Third Year

First Semester	Hours	Second Semester	Hours
CHEM 3321	3	CHEM 3322	3
CHEM 3181	1	CHEM 3182	1
CHEM 3317	3	CHEM 4318	3
PHYS 3313	3	POLS 2312	3
POLS 2311	3	Creative Arts	3
Social and Behavioral Sciences	3	Foundational Component Area	3
	16		**16**

Fourth Year

First Semester	Hours	Second Semester	Hours
CHEM 4311	3	CHEM 4346	3
CHEM 4101	1	CHEM 3000 level or above	3
CHEM 4461	4	HIST 1302	3
HIST 1301	3	Electives	5
Advanced Electives	2		
	13		**14**

Total Hours: 120

Advising Resources

First time in college students should plan to speak to a program advisor when starting their second year. Transfer students should be advised prior to New Maverick Orientation.

Location:

SH 303

Email:

chemugradadvisor@uta.edu

Phone:

817-272-9687

Web:

Advising Information (https://www.uta.edu/academics/schools-colleges/science/departments/chemistry/advising/)