The University of Texas at Tyler **2021-2022**

COLLEGE OF ARTS AND SCIENCES

Bachelor of Science in Chemistry

The Department of Chemistry & Biochemistry offers students an opportunity to acquire a solid fundamental understanding of chemical principles, to acquire basic laboratory skills, to develop skills in oral and written communication and the use of the chemical literature, to gain an appreciation of chemistry, to develop critical thinking and logical reasoning, to use the scientific method, and to develop an ability to learn and work independently that will prepare them for advanced studies and successful careers in industry, medical professions, forensics, government, and education.

Recommended 4-Year Curriculum – B.S. in Chemistry[1]

FRESHMAN YEAR

First Semester			Credit Hours
CHEM	1311	General Chemistry I	3
CHEM	1111	General Chemistry I Lab	1
BIOL	1306	General Biology I	3
BIOL	1106	General Biology I Lab	1
MATH	2413	Calculus I	4
ENGL	1301	Grammar & Composition I	3
		Total Semester Hours	**15**

Second Semester			Credit Hours
CHEM	1312	General Chemistry II	3
CHEM	1112	General Chemistry II Lab	1
BIOL	1307	General Biology II	3
BIOL	1107	General Biology II Lab	1
MATH	2414	Calculus II	4
ENGL	1302	Grammar & Composition II	3
		Total Semester Hours	**15**

SOPHOMORE YEAR

First Semester			Credit Hours
CHEM	3342	Organic Chemistry I	3
CHEM	3143	Organic Chemistry I Lab	1
CHEM	3310	Analytical Chemistry	3
CHEM	3111	Analytical Chemistry Lab	1
HIST	1301	United States History I	3
PHYS	1301/2325	College or University Physics I	3
PHYS	1101/2125	College or University Physics I Lab	1
		Total Semester Hours	**15**

Second Semester			Credit Hours
CHEM	3344	Organic Chemistry II	3
CHEM	3145	Organic Chemistry II Lab	1
HIST	1302	United States History II	3
MATH	1342/3404	Statistics or Multivariate Calculus	3 or 4
PHYS	1302/2326	College or Physics II	3
PHYS	1102/2126	College or Univ. Physics II Lab	1
		Total Semester Hours	**14 or 15**

JUNIOR YEAR

First Semester			Credit Hours
CHEM	3352	Physical Chemistry I	3
CHEM	3153	Physical Chemistry I Lab	1
CHEM	3346	Macro/Nano Chemistry	3
POLS	2305	Intro. American Government	3
_____	_____	Humanities[2]	3
_____	_____	Visual and Performing Arts[3]	3
Total Semester Hours			**16**

Second Semester			Credit Hours
CHEM	3354*	Physical Chemistry II*	3
CHEM	3155*	Physical Chemistry II Lab*	1
CHEM	4332*	Spectroscopy*	3
CHEM	3320	Inorganic Chemistry	3
CHEM	3121	Inorganic Chemistry Lab	1
POLS	2306	Intro. Texas Politics	3
_____	_____	World or European Literature[4]	3
		Total Semester Hours	**17**

SENIOR YEAR

First Semester			Credit Hours
CHEM	4330	Advanced Inorganic Chemistry*	3
CHEM	4334	Biochemistry I	3
CHEM	4135	Biochemistry Lab	1
CHEM	4190	Chemical Literature	1
_____	_____	Approved Elective[6]	3
_____	_____	Social and Behavioral Science[5]	3
		Total Semester Hours	**14**

Second Semester			Credit Hours
CHEM	4312*	Instrumental Analysis	3
CHEM	4113*	Instrumental Analysis Lab	1
CHEM	4346*	Biochemistry II*	3
CHEM	4191	Seminar	1
_____	_____	Approved Electives[6]	6
		Total Semester Hours	**14**

Total hours must equal at least 120 hours, including 42 upper-division hours

NOTES:

[1] Consult with your advisor for additional information on degree requirements and schedule planning.

[2] Humanities (ENGL 2310, 2350; PHIL 1301, 2303, 2306; HIST 2321, 2322; SPCM 1315).

[3] Visual and Performing Arts (ART 1301, 2303, 2304; MUSI 1306, 2301; THTR 1301, 1356).

[4] World or European Literature (ENGL 2322, 2323, 2362 or 2363).

[5] Social &Behavioral Sciences (ANTH 2346; ECON 1301, 2301, 2302; GEOL 1313; HIST 2321, 2322; JOUR 2307, PSYC 1301, 1349; SOCI 1301, 1306).

[6] Approved Advanced Electives chosen from Biology, Physics, Geology, Computer Science, or Education (9 hours).

15 Hours of Advanced Chemistry Classes selected from: CHEM 3354/3155 Physical Chemistry II (Spring)
CHEM 4330 Advanced Inorganic Chemistry (Fall)
CHEM 4344 Molecular Basis of Disease (Spring)
CHEM 4332 Spectroscopy (Spring)
CHEM 4346 Biochemistry II (Spring)

Only 1 of CHEM 4336 or CHEM 4344 may be counted
Either CHEM 3354/3155 or CHEM 4312/4113 must be taken

The Department of Chemistry has a chemistry program approved by the American Chemical Society (ACS). Students who receive a Bachelor of Science degree in chemistry and complete the ACS-approved curriculum will graduate as ACS-certified chemists.

This is only a recommended outline. Because degree requirements do change, you should consult an advisor as well as the University Catalog, which is the only official document regarding baccalaureate degree requirements.