

BACHELOR OF SCIENCE IN BIOCHEMISTRY (AMERICAN CHEMICAL SOCIETY CERTIFICATION)

Total Semester Credit Hours (sch): 120

Major: 51 sch

BIOCHEMISTRY.BS CIP Code: 26.0202.00

The ACS plan, approved by the American Chemical Society, is the most comprehensive offered by the department. Students who complete this degree program will receive ACS professional certification. This program is recommended for those contemplating careers in the chemical industry or for those working toward advanced degrees in chemistry.

Degree Requirements

Texas Core Curriculum

Code	Title	SCHs
ENG 1013	Composition I	3
ENG 1023	Composition II	3
Mathematics		3
Life & Physical Sciences		6
Language, Philosophy, & Culture		3
Creative Arts		3
HIST 1013	History of the United States, 1492-1865	3
HIST 1023	History of the United States, 1865 to the Present	3
GOV 2013	U.S. National Government	3
GOV 2023	Texas Government	3
Social & Behavioral Sciences		3
CAO: Women's Studies		3
CAO: First Year Seminar, Wellness or Mathematics		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 4001	Research Presentations in Chemistry and Biochemistry	1
CHEM 4983	Undergraduate Research	3
CHEM 4313 & CHEM 4311	Instrumental Analysis and Instrumental Analysis Laboratory	4
CHEM 4513 & CHEM 4511	Inorganic Chemistry and Inorganic Chemistry Laboratory	4
CHEM 4991	Senior Thesis	1
Total SCHs		51

Other Requirements

Code	Title	SCHs
MATH 2014	Calculus I (may be applied from core)	4
MATH 2024	Calculus II	4
BIOL 1113 & BIOL 1111	Principles of Biology I and Principles of Biology I Laboratory	4
BIOL 1123 & BIOL 1121	Principles of Biology II and Principles of Biology II Laboratory	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
SCI 2103	Introduction to Environmental Chemistry: Global Perspectives	3
Total SCHs		27

(GP) Satisfies global perspectives graduation requirement.

Plan of Study

First Year		TCCN	SCHs
Fall			
CHEM 1001	Horizons of Chemistry and Biochemistry I: Career Possibilities		1
CHEM 1211	Principles of Chemistry Laboratory I		1
CHEM 1213	Principles of Chemistry I		3
MATH 2014	Calculus I	MATH 2413	4
BIOL 1111	Principles of Biology I Laboratory	BIOL 1106	1

BIOL 1113	Principles of Biology I	BIOL 1306	3	CHEM 3333	Quantitative Chemical Analysis		3
UNIV 1231	Learning Frameworks: The First Year Experience	EDUC 1100, EDUC 1200, EDUC 1300	1	CHEM 3331	Quantitative Chemical Analysis Laboratory		1
Wellness CAO Core			2				
SCHs			16	SCHs			15
Spring				Third Year			
				Fall			
CHEM 1101	Horizons of Chemistry and Biochemistry II: Current Applications		1	CHEM 3411	Physical Chemistry Laboratory I	TCCN	1
CHEM 1221	Principles of Chemistry Laboratory II		1	CHEM 3413	Physical Chemistry I		3
CHEM 1223	Principles of Chemistry II		3	CHEM 3632	Biochemistry I Laboratory		2
MATH 2024	Calculus II	MATH MATH 2414	4	CHEM 3633	Biochemistry I		3
BIOL 1121	Principles of Biology II Laboratory	BIOL 1107	1	GOV 2013	U.S. National Government	GOVT 2305	3
BIOL 1123	Principles of Biology II	BIOL 1307	3	CHEM 4513	Inorganic Chemistry		3
Multicultural Women's Studies CAO Core			3	CHEM 4511	Inorganic Chemistry Laboratory		1
SCHs			16	SCHs			16
Second Year				Spring			
Fall				TCCN			
CHEM 2211	Organic Chemistry Laboratory I	CHEM 2123	1	CHEM 3421	Physical Chemistry Laboratory II		1
CHEM 2213	Organic Chemistry I	CHEM 2323	3	CHEM 3423	Physical Chemistry II		3
PHYS 2151	General Physics Laboratory I	PHYS 2125	1	CHEM 3643	Biochemistry II		3
PHYS 2153	General Physics I	PHYS 2325	3	CHEM 4983	Undergraduate Research		3
ENG 1013	Composition I	ENGL 1301	3	HIST 1013	History of the United States, 1492-1865	HIST 1301	3
SCI 2103 (GP)	Introduction to Environmental Chemistry: Global Perspectives	ENVR 1401	3	SCHs			13
SCHs			14	Fourth Year			
Spring				Fall			
CHEM 3221	Organic Chemistry Laboratory II		1	CHEM 4983	Undergraduate Research	TCCN	3
CHEM 3223	Organic Chemistry II		3	Creative Arts Core			3
PHYS 2161	General Physics Laboratory II	PHYS 2126	1	HIST 1023	History of the United States, 1865 to the Present	HIST 1302	3
PHYS 2163	General Physics II	PHYS 2326	3	GOV 2023	Texas Government	GOVT 2306	3
ENG 1023	Composition II	ENGL 1302	3	CHEM 4313	Instrumental Analysis		3
				CHEM 4311	Instrumental Analysis Laboratory		1
				SCHs			16

Spring		TCCN
CHEM 4001	Research Presentations in Chemistry and Biochemistry	1
CHEM 4991	Senior Thesis	1
	Language, Philosophy, and Culture Core	3
	Social & Behavioral Science Core	3
	Elective	3
	Elective	3
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	SCHs	14
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	Total SCHs:	120

(GP) courses satisfy global perspectives graduation requirement.