B.S. IN CHEMISTRY/ BIOCHEMISTRY (6-12 PHYSICAL SCIENCE TEACHER CERTIFICATION)

Web Site: https://twu.edu/chemistry-biochemistry/undergraduate-programs/bs-in-chemistrybiochemistry-with-teacher-certification/

Recommended Plan of Study

First Year

Fall		**TCCN**	**SCHs**
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
HIST 1013	History of the United States, 1492-1865	HIST 1301	3
UNIV 1231	Learning Frameworks: The First Year Experience	EDUC 1100, EDUC 1200, EDUC 1300	1
Wellness/Mathematics CAO Core			2
	SCHs		**17**
Spring		**TCCN**	
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
HIST 1023	History of the United States, 1865 to the Present	HIST 1302	3
Multicultural Women's Studies Core CAO			3
	SCHs		**17**

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	GOVT 2305	3
Creative Arts Core			3
Language, Philosophy, & Culture Core			3
	SCHs		**17**
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
Social/Behavioral Core			3
	SCHs		**18**

Third Year

Fall		**TCCN**	
EDUC 2003	Schools and Society	EDUC 1301	3
CHEM 3633 & CHEM 3632	Biochemistry I and Biochemistry I Laboratory		5
CHEM 3413 & CHEM 3411	Physical Chemistry I and Physical Chemistry Laboratory I		4
SCI 1114	Sustainable Physical Science	PHYS 1415	4
	SCHs		**16**
Spring		**TCCN**	
EDUC 3003	Learning Theory and Development		3
EDUC 3482	Teaching Diverse Learners Through Technology Integration		2
CHEM 3423 & CHEM 3421	Physical Chemistry II and Physical Chemistry Laboratory II		4
SCI 2113	Earth Science: Global Perspectives	GEOL 1401	3
SCI 3133	Climate Change: A Human Perspective		3
	SCHs		**15**

Fourth Year

Fall		**TCCN**	
EDUC 4113	Design and Implementation of Instruction and Assessment		3
EDUC 4243	Classroom Environment and Management		3
BIOL 4593	Science in the Secondary Classroom		3
READ 3013	Literacy and Learning across the Curriculum		3
EDSP 3203	Learners with Exceptionalities		3
	SCHs		**15**
Spring		**TCCN**	
EDUC 4946	Clinical Student Teaching		6
	SCHs		**6**
	Total SCHs:		**121**