

# BACHELOR OF SCIENCE IN BIOLOGY (7-12 LIFE SCIENCE CERTIFICATION)

**Web Site:** <https://twu.edu/biology/undergraduate-programs/bachelor-of-science-in-biology-with-teacher-certification/>

## Recommended Plan of Study

### First Year

Fall	TCCN	SCHs
BIOL 1113 Principles of Biology I & BIOL 1111 and Principles of Biology I Laboratory	BIOL 1406 & BIOL 1106	4
CHEM 1113 General Chemistry I & CHEM 1111 and General Chemistry Laboratory I	CHEM 1311 & CHEM 1111	4
MATH 1303 Elementary Analysis I	MATH 1314	3
ENG 1013 Composition I	ENGL 1301	3
UNIV 1231 Learning Frameworks: The First Year Experience	EDUC 1100, EDUC 1200, EDUC 1300	1
SCHs		15

Spring	TCCN	SCHs
BIOL 1123 Principles of Biology II & BIOL 1121 and Principles of Biology II Laboratory	BIOL 1407 & BIOL 1107	4
CHEM 1123 General Chemistry II & CHEM 1121 and General Chemistry Laboratory II	CHEM 1312 & CHEM 1112	4
MATH 1313 Elementary Analysis II	MATH 1316	3
ENG 1023 Composition II	ENGL 1302	3
Multicultural Women's Studies CAO Core		3
SCHs		17

### Second Year

Fall	TCCN	SCHs
BIOL 2113 Plant Biology & BIOL 2111 and Plant Biology Laboratory	BIOL 1411 & BIOL 1111	4
BACT 3113 General Microbiology & BACT 3111 and General Microbiology Laboratory		4
CHEM 2213 Organic Chemistry I & CHEM 2211 and Organic Chemistry Laboratory I	CHEM 2323 & CHEM 2123	4
POLS 2013 U.S. National Government	GOVT 2305	3
EDUC 2003 Schools and Society	EDUC 1301	3
SCHs		18

Spring	TCCN	SCHs
BIOL 4223 Ecology & BIOL 4221 and Ecology Laboratory		4
ZOOL 4243 Medical Physiology & ZOOL 4241 and Medical Physiology Laboratory		4
CHEM 3223 Organic Chemistry II & CHEM 3221 and Organic Chemistry Laboratory II		4
POLS 2023 Texas Government	GOVT 2306	3
SCHs		15

### Third Year

Fall	TCCN	SCHs
BIOL 4813 Molecular and Cellular Biology: Gene Expression & BIOL 4811 and Molecular and Cellular Biology: Gene Expression Laboratory		4
PHYS 1133 Principles of Physics I & PHYS 1131 and Principles of Physics Laboratory I	PHYS 1301 & PHYS 1101	4
HIST 1013 History of the United States, 1492-1865	HIST 1301	3
Creative Arts Core		3
Language, Philosophy & Culture Core		3
SCHs		17

Spring	TCCN	SCHs
BIOL 4823 Molecular and Cellular Biology: Genetics and Inheritance & BIOL 4821 and Molecular and Cellular Biology: Genetics and Inheritance Laboratory		4
BIOL 4681 Biology Seminar		1
PHYS 1143 Principles of Physics II & PHYS 1141 and Principles of Physics Laboratory II	PHYS 1302 & PHYS 1102	4
EDUC 3482 Teaching Diverse Learners Through Technology Integration		2
EDUC 3003 Learning Theory and Development		3
HIST 1023 History of the United States, 1865 to the Present	HIST 1302	3
SCHs		17

### Fourth Year

Fall	TCCN	SCHs
BIOL 4593 Science in the Secondary Classroom		3
EDSP 3203 Learners with Exceptionalities		3
EDUC 4113 Design and Implementation of Instruction and Assessment		3
EDUC 4243 Classroom Environment and Management		3
READ 3013 Literacy and Learning across the Curriculum		3
Social/Behavioral Science Core		3
SCHs		18

Spring	TCCN	SCHs
EDUC 4946 Clinical Student Teaching		6
SCHs		6

Total SCHs: 123