

# 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 & BIOL 1111	Principles of Biology I and Principles of Biology I Laboratory	BIOL 1406 & BIOL 1106	4
CHEM 1113 & CHEM 1111	General Chemistry I and General Chemistry Laboratory I	CHEM 1311 & CHEM 1111	4
MATH 1303	College Algebra	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
<b>SCHs</b>			<b>15</b>

Spring		TCCN	SCHs
BIOL 1123 & BIOL 1121	Principles of Biology II and Principles of Biology II Laboratory	BIOL 1407 & BIOL 1107	4
CHEM 1123 & CHEM 1121	General Chemistry II and General Chemistry Laboratory II	CHEM 1312 & CHEM 1112	4
MATH 1703	Elementary Statistics I	MATH 1342	3
ENG 1023	Composition II	ENGL 1302	3
Multicultural Women's Studies CAO Core			3
<b>SCHs</b>			<b>17</b>

### Second Year

Fall		TCCN	SCHs
BIOL 2113 & BIOL 2111	Plant Biology and Plant Biology Laboratory	BIOL 1411 & BIOL 1111	4
BACT 3113 & BACT 3111	General Microbiology and General Microbiology Laboratory		4
CHEM 2213 & CHEM 2211	Organic Chemistry I 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
<b>SCHs</b>			<b>18</b>

Spring		TCCN	SCHs
BIOL 4223 & BIOL 4221	Ecology and Ecology Laboratory		4
ZOOL 4243 & ZOOL 4241	Medical Physiology and Medical Physiology Laboratory		4
CHEM 3223 & CHEM 3221	Organic Chemistry II and Organic Chemistry Laboratory II		4

POLS 2023	Texas Government	GOVT 2306	3
<b>SCHs</b>			<b>15</b>

### Third Year

Fall		TCCN	SCHs
BIOL 4813 & BIOL 4811	Molecular and Cellular Biology: Gene Expression and Molecular and Cellular Biology: Gene Expression Laboratory		4
PHYS 1133 & PHYS 1131	Principles of Physics I 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

Spring		TCCN	SCHs
BIOL 4823 & BIOL 4821	Molecular and Cellular Biology: Genetics and Inheritance and Molecular and Cellular Biology: Genetics and Inheritance Laboratory		4
BIOL 4681	Biology Seminar		1
PHYS 1143 & PHYS 1141	Principles of Physics II 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
<b>SCHs</b>			<b>17</b>

### 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

Spring		TCCN	SCHs
EDUC 4946	Clinical Student Teaching		6
<b>SCHs</b>			<b>6</b>
<b>Total SCHs:</b>			<b>123</b>