

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/>

Degree Requirements

Total Semester Credit Hours (SCH): 123

Major: 36 SCH; **Required Minor:** 26 SCH (Education)

Program Code: BIOLOGY.BS.7-12LIFE; **CIP Code:** 26.0101.00

Lecture and lab must be taken concurrently. A minimum grade of C is mandatory in all required courses for Biology majors.

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
POLS 2013	U.S. National Government	3
POLS 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
BIOL 2113 & BIOL 2111	Plant Biology and Plant Biology Laboratory	4
BACT 3113 & BACT 3111	General Microbiology and General Microbiology Laboratory	4
BIOL 4223 & BIOL 4221	Ecology and Ecology Laboratory	4
BIOL 4593	Science in the Secondary Classroom	3
BIOL 4681	Biology Seminar	1
BIOL 4813 & BIOL 4811	Molecular and Cellular Biology: Gene Expression and Molecular and Cellular Biology: Gene Expression Laboratory	4
BIOL 4823 & BIOL 4821	Molecular and Cellular Biology: Genetics and Inheritance and Molecular and Cellular Biology: Genetics and Inheritance Laboratory	4

ZOOL 4243 & ZOOL 4241	Medical Physiology and Medical Physiology Laboratory	4
Total SCHs		28

Departmental Requirements

Code	Title	SCHs
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
Choose one of the following:		4
CHEM 1113 & CHEM 1111	General Chemistry I and General Chemistry Laboratory I	
CHEM 1213 & CHEM 1211	Principles of Chemistry I and Principles of Chemistry Laboratory I	
Choose one of the following:		4
CHEM 1123 & CHEM 1121	General Chemistry II and General Chemistry Laboratory II	
CHEM 1223 & CHEM 1221	Principles of Chemistry II and Principles of Chemistry Laboratory II	
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
MATH 1303 or MATH 2014	College Algebra Calculus I	3-4
MATH 1703	Elementary Statistics I	3
Choose one of the following:		4
PHYS 1133 & PHYS 1131	Principles of Physics I and Principles of Physics Laboratory I	
PHYS 2153 & PHYS 2151	General Physics I and General Physics Laboratory I	
Choose one of the following:		4
PHYS 1143 & PHYS 1141	Principles of Physics II and Principles of Physics Laboratory II	
PHYS 2163 & PHYS 2161	General Physics II and General Physics Laboratory II	
Total SCHs		38-39

Students must satisfy the 3 SCH global perspectives graduation requirement.

Professional Education Studies

Admission to the Educator Preparation Program is required. Students must apply for admission into the Educator Preparation Program prior to enrolling in EDUC 3003/EDUC 3482, EDUC 4113/EDUC 4243, and EDUC 4946. Information is available from the Office of Educator Preparation Services (<https://twu.edu/teacher-certification/>).

Code	Title	SCHs
Pedagogical and Professional Responsibility		
EDUC 2003	Schools and Society	3
EDUC 3003	Learning Theory and Development	3
EDUC 3482	Teaching Diverse Learners Through Technology Integration	2
EDUC 4113	Design and Implementation of Instruction and Assessment	3

EDUC 4243	Classroom Environment and Management	3
EDUC 4946	Clinical Student Teaching	6
Related Studies in Education		
READ 3013	Literacy and Learning across the Curriculum	3
EDSP 3203	Learners with Exceptionalities	3
Total SCHs		26

Notes:

- a. EDUC 2003 may be taken at a community college. Check with the Office of Educator Preparation Services (<https://twu.edu/teacher-certification/>) to make sure the course has the equivalent number.
- b. EDUC 4113 and EDUC 4243 must be taken during the same semester.