

2027 Advising Guide for Biology Majors and Minors (catalog years of 2025 or earlier)

This guide provides students with information regarding the specific degree requirements associated with completion of the BS and BA degrees in Biology, as well as the minor in Biology. Official degree requirements, including core course requirements, may be found in the TCU Undergraduate Catalog.

Biology BS Requirements

Earning a BS degree at TCU requires the successful completion of **120 total hours**. Of these hours, a minimum of 36 credit hours in Biology and 26-28 credit hours of associated courses are required.

Required Biology courses

BIOL 10503 Unity and Cells	BIOL 30403 Ecology & the Environment
BIOL 10513 Diversity and Organisms	BIOL 30603 Cellular, Molecular & Developmental Biology
BIOL 10523 Introduction to Biological Investigation	BIOL 41000 Senior Assessment (taken in the last semester)

In addition to the courses above, **21 additional upper-level hours in Biology** are required.

- At least three courses used to meet the 21-hour requirement must include a laboratory component.
- No more than 6 hours of teaching courses (BIOL 40820 or 40830) may count toward the upper-level 21 hours.
- No more than 6 hours of research courses (BIOL 40900, 40903, or 40933) may count toward the upper-level 21 hours. One of these courses may count as a laboratory course.
- No more than 8 hours of any combination of the teaching and research courses may count toward the upper-level 21 hours.
- The combination of BIOL 20204 and 20214 (A&P series) count toward the major as 4 hours and one laboratory course.

Associated Requirements

CHEM 10113 General Chemistry I	CHEM 30123 Organic Chemistry I
CHEM 10123 General Chemistry II	CHEM 30121 Organic Chemistry I Laboratory
CHEM 10122 General Chemistry II Lab or 20123 Quantitative Analysis	CHEM 30133 Organic Chemistry II
MATH 10043 Elementary Statistics or 10524 Calculus I	PHYS 10154 General Physics I w/ Laboratory
	PHYS 10164 General Physics II w/ Laboratory

Biology BA Requirements

Earning a BA degree at TCU requires the successful completion of **120 total hours**. Of these hours, a minimum of 27 credit hours of Biology are required. Students pursuing the BA degree must have a **minor** and meet a **foreign language** requirement (competency in a foreign language equivalent to the completion of a 4th semester (Intermediate II) course).

Required Biology courses

BIOL 10503 Unity and Cells	BIOL 30403 Ecology & the Environment
BIOL 10513 Diversity and Organisms	BIOL 30603 Cellular, Molecular & Developmental Biology
BIOL 10523 Introduction to Biological Investigation	BIOL 41000 Senior Assessment (taken in the last semester)

In addition to the courses above, **12 additional upper-level hours in Biology** are required.

- At least two courses used to meet the 12-hour requirement must include a laboratory component.
- A maximum of 3 hours for any combination of teaching and research courses (BIOL 40820, 40830, 40900, 40903, 40933) are permitted within the 12 hours. These courses may not be used to fulfill the upper-level laboratory requirement.
- The combination of BIOL 20204 and 20214 (A&P series) counts toward the major as 4 hours and one laboratory course.

Biology Minor

Earning a Biology minor at TCU requires the successful completion of **21 hours** in Biology.

Recommended Biology courses

BIOL 10503 Unity and Cells	BIOL 30403 Ecology & the Environment
BIOL 10513 Diversity and Organisms	or 30603 Cellular, Molecular & Developmental Biology
BIOL 10523 Introduction to Biological Investigation	

Of the 21 hours, a minimum of 9 hours of upper-division (30000 or above) courses are required.

- A maximum of 3 of these upper division hours may come from a combination of 1-hour seminar courses in biology.
- A maximum of 3 hours for any combination of teaching and research courses (BIOL 40820, 40830, 40900, 40903, 40933) are permitted within the 12 hours.

Special considerations for all students

Pass/No Credit: Two courses may be taken P/NC. No course applied toward the major/minor or associated requirements may be P/NC.

Transfer credits: Up to four courses may be transferred after enrolling at TCU.

GPA: A cumulative 2.0 GPA at TCU and a cumulative 2.0 GPA in biology courses is required for graduation.

Upper Division: At least 36 hours of coursework at 30000 level or above must be taken at TCU.

Research: BIOL 40911 may be required for students conducting research with some faculty, but does not count toward the major



Schedule of Biology Course Offerings

Biology Majors and Minors

(catalog years of 2025 or earlier)

Spring 2027 Scheduled Course Offerings

Fall 2027 Anticipated Course Offerings

Year 1	Success in Biology and Pre Health (10101) Biology Recitation (10970) Unity of Life: Molecules to Cells (10503) Diversity of Life: Organisms to Ecosystems (10513) Introduction to Biological Investigation (10523)	Success in Biology and Pre Health (10101) Biology Recitation (10970) Unity of Life: Molecules to Cells (10503) Diversity of Life: Organisms to Ecosystems (10513) Introduction to Biological Investigation (10523)
Year 2	Cellular, Molecular & Developmental Biol (30603)	Ecology and the Environment (30403) Cellular, Molecular & Developmental Biol (30603)
Years 3 and 4	Lecture Courses Introductory Neuroscience (30463) Hormones and Behavior (30593) Human Parasitology (30803) Genetics (40123) Human Physiology (40403) **SPRING ONLY** Virology (40603) Biochemistry II (50143) Functional Neuroanatomy (50463) Anthropogenic Disturbance of Wildlife (50533)	Lecture Courses Introductory Neuroscience (30463) Genetics (40123) Molecular Basis of Human Disease (40133) Immunology (40254) Fundamentals of Biochemistry (40513) Biochemistry I (50133)
	Laboratory Courses Anatomy & Physiology I* (LAB) Microbiology (LAB) (30304) Introduction to Marine Science (LAB) (30324) Human Anatomy (LAB) (30414) Natural History (LAB) (30613) Conservation Genetics (LAB) (40153) Histology (LAB) (40203) Developmental Biology (LAB) (40224) Immunology (LIT or LAB) (40254) Structural Biology of Drug Design (LAB) (40523) Spatial Ecology (LAB) (40720) Biostatistics (LAB) (50123) Biochemistry Lab (LAB, W) (50502)	Laboratory Courses Anatomy & Physiology II* (LAB) Invertebrate Biology (LAB) (30104) Microbiology (LAB) (30304) Human Anatomy (LAB) (30414) Natural History (LAB) (30613) Biotechnology Lab Techniques (LAB) (40131) Biostatistics (LAB) (50123)
	Other Courses Biology of Cancer (40001) Topics in Medicine (40110, 0.5 hrs) - Overview of Healthcare Careers I/II - Building a Resilient Career I/II - Becoming a Great Applicant Senior Assessment (41000; taken in the last semester)	Other Courses Current Research in Biology (40011) Topics in Medicine (40110, 0.5 hrs) - The Practice of Medicine - Introduction to Healthcare Professional Development in Biology (40701) Oncology and Community Health (50901) Senior Assessment (41000; taken in the last semester)
	Summer 2027: Global Perspectives in Health (SA) (40703)	Special Problems/Projects Courses (both semesters; 1-3 credit hours) Teaching of Introductory Level Biology (40820) Teaching of Advanced Biology (40830) Biological Research & Writing (W, LIT) (40903) Intro to Independent Research (LAB) (40900) Advanced Independent Research (40910) Discussions in Biological Research (40911) Senior Honors Research (W, LIT) (40933)

LAB = Upper-level Lab Course

W = Writing Emphasis Course

LIT = Literature-Intensive Course

SA = Study Abroad Course

*The combination of BIOL 20204 & 20214 counts as 4 hours of upper-division Biology hours and 1 lab course

Course offerings are subject to change; students are to consult the official course schedule to confirm course availability