

# ACCELERATED BACHELOR OF SCIENCE IN BIOLOGY/MASTER OF SCIENCE IN BIOLOGY

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

## Degree Requirements

**Total Semester Credit Hours (SCH):** 120

**Major:** 48 SCH

**Program Code:** \_\_\_\_\_ **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

| Course                                                | Title                                                  | Credits   |
|-------------------------------------------------------|--------------------------------------------------------|-----------|
| ENG 1013                                              | Composition I (10)                                     | 3         |
| ENG 1023                                              | Composition II (10)                                    | 3         |
| Mathematics (20)                                      |                                                        | 3         |
| Life & Physical Sciences (30)                         |                                                        | 6         |
| Language, Philosophy, & Culture (40)                  |                                                        | 3         |
| Creative Arts (50)                                    |                                                        | 3         |
| HIST 1013                                             | History of the United States, 1492-1865 (60)           | 3         |
| HIST 1023                                             | History of the United States, 1865 to the Present (60) | 3         |
| POLS 2013                                             | U.S. National Government (70)                          | 3         |
| POLS 2023                                             | Texas Government (70)                                  | 3         |
| Social & Behavioral Sciences (80)                     |                                                        | 3         |
| CAO: Multicultural-Women's Studies (90)               |                                                        | 3         |
| CAO: First Year Seminar, Wellness or Mathematics (91) |                                                        | 3         |
| <b>Total SCHs</b>                                     |                                                        | <b>42</b> |

### Courses Required for Major

| Course                   | Title                                                                                                                                     | Credits |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------|
| BIOL 2113<br>& BIOL 2111 | Plant Biology<br>and Plant Biology Laboratory                                                                                             | 4       |
| BACT 3113<br>& BACT 3111 | General Microbiology<br>and General Microbiology Laboratory                                                                               | 4       |
| ZOOL 4243<br>& ZOOL 4241 | Medical Physiology<br>and Medical Physiology Laboratory                                                                                   | 4       |
| BIOL 4813<br>& BIOL 4811 | Molecular and Cellular Biology: Gene<br>Expression<br>and Molecular and Cellular Biology: Gene<br>Expression Laboratory                   | 4       |
| BIOL 4823<br>& BIOL 4821 | Molecular and Cellular Biology: Genetics and<br>Inheritance<br>and Molecular and Cellular Biology: Genetics<br>and Inheritance Laboratory | 4       |
| BIOL 4293                | Scientific Communication                                                                                                                  | 3       |
| BIOL 4681                | Biology Seminar                                                                                                                           | 1       |
| BIOL 4983                | Undergraduate Research (Taken 4 times)                                                                                                    | 12      |

### Graduate Requirements in the Fourth Year 12

|           |                                                                                        |
|-----------|----------------------------------------------------------------------------------------|
| BIOL 5503 | Research Methods (or other BIOL Graduate Elective)                                     |
| BIOL 5333 | Advanced Pathophysiology (or other BIOL Graduate Elective)                             |
| BIOL 5543 | Genome Editing and Ethics, Policy, and Public Impact (or other BIOL Graduate Elective) |
| BIOL 5611 | Readings in Biology                                                                    |
| BIOL 5681 | Seminar                                                                                |
| BIOL 5801 | Biological Research (First-Year Paper Milestone)                                       |

**Total SCHs** **48**

### Departmental Requirements

| Course                       | Title                                                                   | Credits   |
|------------------------------|-------------------------------------------------------------------------|-----------|
| BIOL 1113<br>& BIOL 1111     | Principles of Biology I<br>and Principles of Biology I Laboratory       | 4         |
| BIOL 1123<br>& BIOL 1121     | Principles of Biology II<br>and Principles of Biology II Laboratory     | 4         |
| Choose one of the following: |                                                                         | 4         |
| CHEM 1113<br>& CHEM 1111     | General Chemistry I<br>and General Chemistry Laboratory I               |           |
| CHEM 1213<br>& CHEM 1211     | Principles of Chemistry I<br>and Principles of Chemistry Laboratory I   |           |
| Choose one of the following: |                                                                         | 4         |
| CHEM 1123<br>& CHEM 1121     | General Chemistry II<br>and General Chemistry Laboratory II             |           |
| CHEM 1223<br>& CHEM 1221     | Principles of Chemistry II<br>and Principles of Chemistry Laboratory II |           |
| CHEM 2213<br>& CHEM 2211     | Organic Chemistry I<br>and Organic Chemistry Laboratory I               | 4         |
| CHEM 3223<br>& CHEM 3221     | Organic Chemistry II<br>and Organic Chemistry Laboratory II             | 4         |
| Choose one of the following: |                                                                         | 4         |
| PHYS 1133<br>& PHYS 1131     | Principles of Physics I<br>and Principles of Physics Laboratory I       |           |
| PHYS 2153<br>& PHYS 2151     | General Physics I<br>and General Physics Laboratory I                   |           |
| Choose one of the following: |                                                                         | 4         |
| PHYS 1143<br>& PHYS 1141     | Principles of Physics II<br>and Principles of Physics Laboratory II     |           |
| PHYS 2163<br>& PHYS 2161     | General Physics II<br>and General Physics Laboratory II                 |           |
| MATH 1303<br>or MATH 2014    | College Algebra<br>Calculus I                                           | 3         |
| MATH 1703                    | Elementary Statistics I                                                 | 3         |
| <b>Total SCHs</b>            |                                                                         | <b>38</b> |

Degree requirements listed here are for completion of the undergraduate portion of the accelerated B.S. in Biology / M.S. in Biology program. In the third year of the B.S. in Biology, students must apply for formal admission to the M.S. in Biology graduate program and meet all admissions requirements. Please see the Graduate Catalog for a complete list of degree requirements for the M.S. in Biology program (<https://catalog.twu.edu/graduate/arts-sciences/biology/biology-ms/>).