



## Springfield College Sequencing Guide Biology and Education Majors (BIOL&EDUC/SED) ▼ 2021-2022 Secondary Education Licensure Program

If you entered Springfield College in 2021-2022, use this guide for sequencing your courses. Requirements are subject to change and may not be offered when listed. Use your online degree audit to verify your progress, and always confirm your plans with your advisor.

### Core Curriculum Requirements, Electives, and College Requirements

In addition to the major requirements listed below, you will need to fill the following Core Curriculum categories:

- |  |                                |                                |
|--|--------------------------------|--------------------------------|
| • 100-level Wellness & Physical (1 cr) | • Literature (3 cr)            | • Aesthetic Expression (3 cr)  |
| • 200-level Wellness & Physical (1 cr) | • Spiritual and Ethical (3 cr) | • Historical and Social (3 cr) |
| • 300-level Wellness & Physical (1 cr) |                                |                                |

These majors typically require 107 to 110 credits to complete, totaling up to 131 to 134 credits with Core Curriculums.

In addition to the requirements previously listed, you must complete:

- The **residency requirement**—45 credits taken at Springfield College (including 15 of your last 30)

### BIOL & EDUC/SED Major Requirements – Typical First-Year Schedule

**Fall:**

SCSM 101, Springfield College Seminar (Core requirement – 3 cr)  
 ENGL 113, College Writing I (Core requirement – 3 cr)  
 BIOL 121, Bioscience I (3 cr – also fills Scientific Reasoning Core)  
 BIOL 123, Bioscience I Laboratory (1 cr – also fills Scientific Reasoning Core)  
 CHEM 121, General Chemistry I (3 cr)  
 CHEM 123, General Chemistry I Laboratory (1 cr)  
 EDUC 237, Foundations of Multicultural Education (3 cr – fills Themed Exploration Core)

**Spring:**

ENGL 114, College Writing II (Core requirement – 3 cr)  
 BIOL 122, Bioscience II (3 cr)  
 BIOL 124, Bioscience II Laboratory (1 cr)  
 CHEM 122, General Chemistry II (3 cr)  
 CHEM 124, General Chemistry II Laboratory (1 cr)  
 EDUC 101, Schools, Society and Diverse Learners (3 cr)

**Fall or Spring:**

At least one of two required MATH courses: Choose from MATH 125, 131, 140, 142, or 215 (3 cr each; one also fills Quantitative Reasoning Core)  
 Take Comm/Lit MTEL

### BIOL & EDUC/SED Major Requirements – Typical Second-Year Schedule

**Fall:**

BIOL 282, Biology Skills and Career Pathways (1 cr)  
 CHEM 221, Organic Chemistry I (3 cr)  
 CHEM 223, Organic Chemistry I Laboratory (1 cr)  
 EDUC 250, Childhood and Adolescent Development in Educational Settings (3 cr)  
 Plus other Core and major requirements, or electives to total approximately 17-18 credits

**Spring:**

CHEM 222, Organic Chemistry II (3 cr)  
 CHEM 224, Organic Chemistry II Laboratory (1 cr)  
 \*EDUC 162, Exceptional Children (3 cr)  
 \*EDUC 238, Pre-Practicum in Special Education (PreK-8) (1 cr)  
 Plus other Core and major requirements, or electives to total approximately 35 – 36 credits for the year

**Fall or Spring:**

If not yet taken, the second of two required MATH courses: Choose from MATH 125, 131, 140, 142, or 215 (3 cr each)

### BIOL & EDUC/SED Major Requirements – Typical Third-Year Schedule

#### Fall:

BIOL 315, General Microbiology (3 cr) and BIOL 317, General Microbiology Laboratory (1 cr)  
 BIOL 380, Genetics (3 cr – also fills WAC) and BIOL 381, Genetics Laboratory (1 cr) **OR** BIOL 270, Plant Biology (3 cr) and BIOL 271, Plant Biology Laboratory (1 cr)  
 \*EDUC 234, Curriculum, Methods, and Organization for Secondary Teachers (3 cr)  
 \*EDUC 318, Tutorial Pre-Practicum (3 cr)  
 PHYS 210, General Physics I (with laboratory; 4 cr)  
 Plus other Core and major requirements, or electives to total approximately 17 – 18 credits

#### Spring:

BIOL 260, General Ecology (3 cr) and BIOL 261, General Ecology Laboratory (1 cr)  
 CISC 150, Computing and Digital Literacy (3 cr – fills Themed Exploration Core)  
 EDUC 328, Sheltered English Immersion (3 cr – fills Themed Exploration Core)  
 EDUC 364, Pre-Practicum – Teaching and Special Issues in Secondary Education (3 cr)  
 PHYS 211, General Physics II (with laboratory; 4 cr)  
 Take Biology MTEL  
 Plus other Core and major requirements, or electives to total approximately 35 – 36 credits for the year

\*These courses should be taken concurrently (during the same semester).

### BIOL & EDUC/SED Major Requirements – Typical Fourth-Year Schedule

#### Fall:

BIOL 380, Genetics (3 cr – also fills WAC) and BIOL 381, Genetics Laboratory (1 cr) **OR** BIOL 270, Plant Biology (3 cr) and BIOL 271, Plant Biology Laboratory (1 cr)  
 BIOL 482, Seminar in Biology (3 cr)  
 Plus other Core and major requirements, or electives to total approximately 17 – 18 credits

#### Spring:

Select a minimum of **12 credits** (in consultation with your advisor) from:  
 EDUC 464, Middle School Practicum and Seminar (4-12 cr)  
 EDUC 465, High School Practicum and Seminar (4-12 cr)  
 Plus any outstanding Core or major requirements

### Additional BIOL & EDUC/SED Major Requirements – Flexible Timing

Select **three courses** (9 to 12 credits) and accompanying labs from the following:

BIOL 230, Animal Biology (3 cr – Fall only)  
 BIOL 250, Human Anatomy and Physiology I (3 cr – STRONGLY RECOMMENDED in Fall of 2<sup>nd</sup> year) and BIOL 252, Human Anatomy and Physiology I Laboratory (1 cr)  
 BIOL 251, Human Anatomy and Physiology II (3 cr – STRONGLY RECOMMENDED in Spring of 2<sup>nd</sup> year) and BIOL 253, Human Anatomy and Physiology II Laboratory (1 cr)  
 BIOL 264, Flora and Fauna of New England (3 cr – offered Fall of odd years) and BIOL 266, Flora and Fauna of New England Laboratory (1 cr)  
 BIOL 310, Evolution (3 cr)  
 BIOL 311, Human Histology (3 cr – offered Spring every other year) and BIOL 312, Human Histology Laboratory (1 cr)  
 BIOL 316, Virology and Immunology (3 cr – also fills WAC)

BIOL 320, International Tropical Field Research (4 cr – offered Spring of even years)  
 BIOL 341, Developmental Biology (3 cr – Spring, if offered)  
 BIOL 408, Research Methods in Cell Biology (3 cr – Spring, if offered) and BIOL 409, Research Methods in Cell Biology Laboratory (1 cr)  
 BIOL 420, Cellular Physiology (3 cr – Spring, if offered) and BIOL 421, Cellular Physiology Laboratory (1 cr)  
 CHEM 331, Biological Chemistry (3 cr)  
 CHEM 341, Analytical Chemistry (2 cr – Spring, if offered) and CHEM 342, Analytical Chemistry Laboratory (2 cr)  
 CHEM 351, Physical Chemistry with Biological Applications (3 cr – Spring, if offered) and CHEM 352, Physical Chemistry Laboratory (1 cr)  
 ENVS 120, Foundations of Sustainability (3 cr)

### BIOL Major – Program Standards

Program standards for the BIOL major include, but are not limited to:

- A grade of C- or better in all courses required for the BIOL major, including selectives.

### EDUC Major – Program Standards

Program standards for the EDUC major include, but are not limited to:

- A minimum cumulative GPA of 2.750 for all designated licensure courses (see *Educator Preparation Handbook* for more information)
- Earn a minimum cumulative GPA of 2.500
- Receive a passing score on the Communication and Literacy Skills Test (reading and writing) of the Massachusetts Test for Education Licensure (MTEL)
- Receive passing scores on the appropriate MTEL Subject Tests
- Earn minimum grades specified for designated course (see the *Educator Preparation Handbook*)

For more information about these and other program standards, contact your advisor or the EDUC department chairperson.