

B.S.Ed. Secondary Education: Biology Requirements

The BSED Secondary Education Biology program provides course preparation in Education and Biology and includes clinical experiences. The program leads to a bachelor's degree and teaching certification in grades 7 to 12 Secondary Biology.

Note that all students must achieve 120 undergraduate credits and a minimum 3.0 overall GPA to graduate. The final GPA requirement for Secondary Education Biology is 3.0.

Required Biology Courses – 30 credits

See also the Directed General Education section below.

BIOL 106 Intro to Zoology (4 credits)

BIOL 108 Intro to Botany (4 credits)

BIOL 222 Environmental Biology (3 credits)

BIOL 224 Applied Environmental Microbiology (3 credits)

BIOL 226 General Physiology (3 credits)

BIOL 235 Genetics (4 credits)

BIOL 218 Vertebrate Biology (3 credits) *or* BIOL 302 Entomology (3 credits) *or* BIOL 314 Animal Behavior (3 credits)

BIOL 230 Taxonomy of Vascular Plants (3 credits) *or* BIOL 232 Plant Physiology (3 credits) *or* BIOL 324 Plant Ecology (3 credits)

BIOL 346 Molecular Biology (3 credits) *or* BIOL 350 Cell Biology (3 credits)

Required Physical Science Courses – 12 credits

CHEM 100 General Chemistry (4 credits)

CHEM 102 General Chemistry II (4 credits)

CHEM 204 Fundamentals of Organic Chemistry I (4 credits)

Required Mathematics Courses – 6 or 7 credits

MATH 140 Applied Statistical Mathematics (3 credits)

MATH 106 Trigonometry *or* MATH 115 Precalculus Mathematics *or* MATH 181 Calculus I (3-4 credits)

Education Professional Courses – 15 credits

Students must achieve a B or better in professional coursework.

SEED 312 Principles of Learning (3 credits)

SEED 313 Principles of Learning Lab (3 credits)

SEED 342 Principles of Teaching (3 credits)

SEED 343 Principles of Teaching Lab (3 credits)

SEED 410 Science Methods for Middle & High School (3 credits)

Clinical Experience Courses – 12 credits

SEED 390 Clinical Experience I (6 credits)

SEED 391 Clinical Experience II (6 credits)

Directed General Education Courses – 23 credits

While counting toward General Education fulfillment, these courses are required for completion of the major.

Required before candidacy:

The following courses must be taken before a student can take their education professional coursework. Additionally, to achieve candidacy, a student must pass the state's basic skills requirement, earn a 3.0 GPA or higher and complete pre-candidacy field hours.

COMP 100-level course – Category A1 (3 credits) *Final grade of C or better is required.*

ENGL Literature course – Category D (3 credits) *Final grade of C or better is required.*

EDUC 100 Perspectives on American Education – Category B (3 credits)

SPEE 201 Cognitive Development of Diverse Learners – Category B (3 credits)

SPEE 314 Effective Instructional Strategies – Category B (3 credits)

Not required before candidacy:

BIOL 104 Principles of Biology – Category C1 (4 credits)

PHYS 040 General Physics I – Category C3 (4 credits)

University Elective Courses – 3 credits

Depending on your general education course selection, you may need 3 elective credits to meet the university 120 credit minimum. These elective courses may be selected from any department including Education.

Program Plan Code: BSED_SCED_BIOL

Effective Date: Fall 2018



Secondary Education: Biology Major Check Sheet

Student Name:

Student ID Number:

This check sheet provides a mechanism for students and advisors to keep track of a student's progress in the program. Please refer to the program requirements for more details regarding options.

Note that all students must achieve 120 undergraduate credits and a minimum 3.0 overall GPA to graduate. The final GPA requirement for Secondary Education Biology is 3.0.

Required Biology Courses – 30 credits

BIOL 106 Intro to Zoology	4 credits	Grade:
BIOL 108 Intro to Botany	4 credits	Grade:
BIOL 222 Environmental Biology	3 credits	Grade:
BIOL 224 Applied Environmental Microbiology	3 credits	Grade:
BIOL 226 General Physiology	3 credits	Grade:
BIOL 235 Genetics	4 credits	Grade:
BIOL 218 Vertebrate Biology or BIOL 302 Entomology or BIOL 314 Animal Behavior	3 credits	Grade:
BIOL 230 Taxonomy of Vascular Plants or BIOL 232 Plant Physiology or BIOL 324 Plant Ecology	3 credits	Grade:
BIOL 346 Molecular Biology or BIOL 350 Cell Biology	3 credits	Grade:
Total Credits	30 total credits	

Required Physical Science Courses - 12 credits

CHEM 100 General Chemistry	4 credits	Grade:
CHEM 102 General Chemistry II	4 credits	Grade:
CHEM 204 Fundamentals of Organic Chemistry I	4 credits	Grade:
Total Credits	12 total credits	

Required Mathematics Courses – 6 or 7 credits

MATH 140 Applied Statistical Mathematics	3 credits	Grade:
MATH 106 Trigonometry or MATH 115 Precalculus Mathematics or MATH 181 Calculus I	3 or 4 credits	Grade:
Total Credits	6-7 total credits	

Education Professional and Clinical Experiences Courses - 27 credits

SEED 312 Principles of Learning	3 credits	Grade:
SEED 313 Principles of Learning Lab	3 credits	Grade:
SEED 342 Principles of Teaching	3 credits	Grade:
SEED 343 Principles of Teaching Lab	3 credits	Grade:
SEED 410 Biology Methods for Middle & High School	3 credits	Grade:
SEED 390 Clinical Experiences I	6 credits	Grade:
SEED 391 Clinical Experiences II	6 credits	Grade:
Total Credits	27 total credits	

Directed General Education Courses

COMP 100-level course (Category A1) <i>Final grade of C or better is required.</i>	3 credits	Grade:
ENGL Literature Course (Category D) <i>Final grade of C or better is required.</i>	3 credits	Grade:
EDUC 100 Perspectives on American Ed (Category B)	3 credits	Grade:
SPEE 201 Cognitive Development of Diverse Learners (Category B)	3 credits	Grade:
SPEE 314 Effective Instructional Strategies (Category B3)	3 credits	Grade:
BIOL 104 Principles of Biology (Category C1)	4 credits	Grade:
PHYS 040 General Physics I (Category C3)	4 credits	Grade:

University Elective Courses – 3 credits

Course 1:	3 credits	Grade:
Total Credits	3 credits	

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KU Secondary Education: Biology 8-Semester Planner

Student Name:

Student ID Number:

Each semester listed below provides information including course categories, typical credit hours (CH.), and space to add specific course selections. This planner is a suggested path. Consult with your advisor regarding your unique plans and interests as you make choices about your schedule.

First Semester Plan

Gen Ed	COMP 100 (Category A1)	3 CH.	Selection:
Gen Ed	Category C2	3 or 4 CH.	Selection:
Gen Ed	FYSM 100	3 CH.	Selection: FYSM 100 -
Gen Ed	EDUC 100 (Category B)	3 CH.	Selection:
Gen Ed	BIOL 104 (Category C1)	4 CH.	Selection:
Total		16-17 CH.	

Second Semester Plan

Gen Ed	Category A2	3 CH.	Selection:
Gen Ed	Category A3	3 CH.	Selection:
Gen Ed	PHYS 040 (Category C3)	4 CH.	Selection:
Gen Ed	SPEE 201 (Category B)	3 CH.	Selection:
Major	Required Math course	3 or 4 CH.	Selection:
Total		16-17 CH.	

Third Semester Plan

Gen Ed	English Literature Course (Category D)	3 CH.	Selection:
Gen Ed	Category D	3 CH.	Selection:
Gen Ed	Category A4	3 CH.	Selection:
Major	Required Science Course	3 or 4 CH.	Selection:
Major	Required Science Course	3 or 4 CH.	Selection:
Total		15-17 CH.	Selection:

Fourth Semester Plan

Gen Ed	Category D	3 CH.	Selection:
Gen Ed	SPEE 314 (Category B)	3 CH.	Selection:
Major	Required Math Course	3 or 4 CH.	Selection:
Major	Required Science Course	3 or 4 CH.	Selection:
Major	Required Science Course	3 or 4 CH.	Selection:
Total		15-18 CH.	

Fifth Semester Plan

Major	SEED 312	3 CH.	Selection:
Major	SEED 313	3 CH.	Selection:
Major	Required Science Course	3 or 4 CH.	Selection:
Major	Required Science Course	3 or 4 CH.	Selection:
Elective	Elective Course	3 CH.	Selection:
Total		15-17 CH.	

Sixth Semester Plan

Major	SEED 342	3 CH.	Selection:
Major	SEED 343	3 CH.	Selection:
Major	Required Science Course	3 or 4 CH.	Selection:
Major	Required Science Course	3 or 4 CH.	Selection:
Major	Required Science Course	3 or 4 CH.	Selection:
Total		15-18 CH.	

Seventh Semester Plan

Major	SEED 410	3 CH.	Selection:
Major	Required Science Course	3 or 4 CH.	Selection:
Major	Required Science Course	3 or 4 CH.	Selection:
Major	Required Science Course	3 or 4 CH.	Selection:
Total		12-15 CH.	

Eighth Semester Plan

Major	SEED 390	6 CH.	Selection:
Major	SEED 391	6 CH.	Selection:
Total		12 CH.	

Additional Notes:

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