

B.S.Ed. Secondary Education: Chemistry Requirements

The BSED Secondary Education Chemistry Program provides course preparation in education and chemistry and includes clinical experience. The program leads to a bachelor's degree and teaching certification in 7-12 Secondary Chemistry.

Note that all students must achieve 120 undergraduate credits and a minimum 3.0 overall GPA to graduate. Most students will graduate with 120 credits in this major; however, depending on selection of coursework, you may go over the 120-credit minimum. The final GPA requirement for Secondary Education Chemistry is 3.0.

Required Chemistry Courses – 40 credits

CHEM 100 General Chemistry I (4 credits)
CHEM 102 General Chemistry II (4 credits)
CHEM 214 Organic Chemistry I (4 credits)
CHEM 216 Organic Chemistry II (4 credits)
CHEM 230 Analytical Chemistry I (4 credits)
CHEM 310 Biochemistry I (4 credits)
CHEM 314 Physical Chemistry I (4 credits)
CHEM 316 Physical Chemistry II (4 credits)
CHEM 320 Advanced Inorganic Chemistry I (4 credits)
CHEM 340 Analytical Chemistry II (4 credits)

Required Science Courses – 7 or 8 credits

PHYS 102 Physics II (4 credits)
ASTR 140 Planetary Science or ASTR 142 Stellar and Galactic Astronomy or GEOG 204 Meteorology or GEOL 100 Physical Geology (3-4 credits)

Required Mathematics Course – 4 credits

See also the Directed General Education section below.

MATH 182 Calculus II (4 credits) *Final grade of C or better is required.*

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 – 27 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)

MATH 181 Calculus I – Category C2 (4 credits) *Final grade of C or better is required.*

PHYS 100 Physics I – Category C3 (4 credits)

Program Plan Code: BSSED_SCED_CHEM

Effective Date: Fall 2018

KU Secondary Education Chemistry 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. Most students will graduate with 120 credits in this major; however, depending on selection of coursework, you may go over the 120-credit minimum. The final GPA requirement for Secondary Education Chemistry is 3.0.

Required Chemistry Core Courses – 40 credits

CHEM 100 General Chemistry I	4 credits	Grade:
CHEM 102 General Chemistry II	4 credits	Grade:
CHEM 214 Organic Chemistry I	4 credits	Grade:
CHEM 216 Organic Chemistry II	4 credits	Grade:
CHEM 230 Analytical Chemistry I	4 credits	Grade:
CHEM 310 Biochemistry I	4 credits	Grade:
CHEM 314 Physical Chemistry I	4 credits	Grade:
CHEM 316 Physical Chemistry II	4 credits	Grade:
CHEM 320 Advanced Inorganic Chemistry I	4 credits	Grade:
CHEM 340 Analytical Chemistry II	4 credits	Grade:
Total Credits	40 total credits	

Required Science Courses – 7 or 8 credits

ASTR 140 Planetary Science <i>or</i> ASTR 142 Stellar and Galactic Astronomy <i>or</i> GEOG 204 Meteorology <i>or</i> GEOG 100 Physical Geology	3 or 4 credits	Grade:
PHYS 102 Physics II	4 credits	Grade:
Total Credits	7 or 8 credits	

Required Mathematics Course – 4 credits

MATH 182 Calculus II	4 credits	Grade:
Total Credits	4 total credits	

Education Professional Courses – 15 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 Science Methods for Middle & High School	3 credits	Grade:
Total Credits	15 total credits	

Clinical Experience Courses – 12 credits

SEED 390 Clinical Experience I	6 credits	Grade:
SEED 391 Clinical Experience II	6 credits	Grade:
Total Credits	12 total credits	

Directed General Education Courses

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

COMP 100-Level (Category A1)	3 credits	Grade:
ENGL Literature Course (Category D)	3 credits	Grade:
EDUC 100 Perspectives on American Education (Cat B)	3 credits	Grade:
SPEE 201 Cognitive Development of Diverse Learners (Category B)	3 credits	Grade:
SPEE 314 Effective Instructional Strategies (Category B)	3 credits	Grade:
BIOL 104 Principles of Biology (Category C1)	4 credits	Grade:
MATH 181 Calculus I (Category C2)	4 credits	Grade:
PHYS 100 Physics I (Category C3)	4 credits	Grade:

Summary of Graduation Requirements

Total credits from major courses	78-79
Total credits from general education program	42-45
Minimum total credits to graduate	120
Minimum overall GPA	3.0
Minimum GPA in major program	3.0

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KU Secondary Education: Chemistry 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	FYSM 100	3 CH.	Selection: FYSM 100 -
Gen Ed	COMP 100 (Category A1)	3 CH.	Selection:
Gen Ed	EDUC 100 (Category B)	3 CH.	Selection:
Major	CHEM 100	4 CH.	Selection:
Major	MATH 181 (Category C2)	4 CH.	Selection:
Total		17 CH.	

Second Semester Plan

Gen Ed	Category A2	3 CH.	Selection:
Gen Ed	Category A3	3 CH.	Selection:
Major	MATH 182	4 CH.	Selection:
Gen Ed	SPEE 201 (Category B)	3 CH.	Selection:
Major	Required Science Course	4 CH.	Selection:
Total		17 CH.	

Third Semester Plan

Gen Ed	ENGL Literature (Category D)	3 CH.	Selection:
Gen Ed	BIOL 104 (Category C1)	4 CH.	Selection:
Gen Ed	PHYS 100 (Category C3)	4 CH.	Selection:
Major	Required Science Course	4 CH.	Selection:
Major	Required Education Course	3 CH.	Selection:
Total		15-16 CH.	Selection:

Fourth Semester Plan

Gen Ed	Category D	3 CH.	Selection:
Gen Ed	Category A4	3 CH.	Selection:
Gen Ed	SPEE 314 (Category B)	3 CH.	Selection:
Gen Ed	Category D	3 CH.	Selection:
Major	Required Science Course	4 CH.	Selection:
Total		16 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:
Total		12-14 CH.	

Sixth Semester Plan

Major	SEED 342	3 CH.	Selection:
Major	SEED 343	3 CH.	Selection:
Major	Required Science Course	4 CH.	Selection:
Major	Required Science Course	4 CH.	Selection:

Major	Required Science Course	4 CH.	Selection:
Total		18 CH.	

Seventh Semester Plan

Major	SEED 410	3 CH.	Selection:
Major	Required Science Course	4 CH.	Selection:
Major	Required Science Course	4 CH.	Selection:
Elective		3 CH.	Selection:
Total		14 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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