

B.S.Ed. Secondary Education: Physics Requirements

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

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 Physics is 3.0. Most students will graduate from this program with 123 credits.

Required Physics Courses – 36 credits

PHYS 100 Physics I (4 credits)
PHYS 102 Physics II (4 credits)
PHYS 212 Modern Physics I (3 credits)
PHYS 214 Modern Physics II (3 credits)
PHYS 230 Optics (3 credits)
PHYS 245 Mathematical Physics I (3 credits)
PHYS 312 Classical Mechanics I (4 credits)
PHYS 315 Advanced Physics Laboratory (3 credits)
PHYS 316 Electricity and Magnetism I (3 credits)

Choose two courses from the following three courses:

PHYS 220 Electronics (3 credits)
PHYS 327 Thermodynamics & Statistical Mechanics (3 credits)
MATH 340 Differential Equations (3 credits)

Additional Science Courses – 7 credits

CHEM 102 General Chemistry II (4 credits)
ASTR 140 Planetary Science (3 credits) *or* ASTR 142 Stellar and Galactic Astronomy (3 credits)

Required Mathematics Courses – 8 credits

MATH 182 Calculus II (4 credits)
MATH 283 Calculus III (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 430 Math 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

The student must achieve a C or better in the following classes.

COMP 100-level course – Category A1 (3 credits)

ENGL Literature course – Category D (3 credits)

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)

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

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

MATH 181 Calculus I – Category C2 (4 credits)

CHEM 100 General Chemistry I – Category C3 (4 credits)

Program Plan Code: BSED_SCED_PHYS

Effective Date: Fall 2018

KU Secondary Education Physics 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 Physics is 3.0.

Required Physics Courses – 36 credits

PHYS 100 Physics I	4 credits	Grade:
PHYS 102 Physics II	4 credits	Grade:
PHYS 212 Modern Physics I	3 credits	Grade:
PHYS 214 Modern Physics II	3 credits	Grade:
PHYS 230 Optics	3 credits	Grade:
PHYS 245 Mathematical Physics I	3 credits	Grade:
PHYS 312 Classical Mechanics I	4 credits	Grade:
PHYS 315 Advanced Physics Laboratory	3 credits	Grade:
PHYS 316 Electricity and Magnetism I	3 credits	Grade:
<i>Chose two courses from the following:</i> PHYS 220 Electronics or PHYS 327 Thermodynamics & Statistical Mechanics or MATH 340 Differential Equations	3 credits	Grade:
Total Credits	36 total credits	

Additional Required Science Course – 7 credits

CHEM 102 General Chemistry II	4 credits	Grade:
ASTR 140 Planetary Science or ASTR 142 Stellar and Galactice Astronomy	3 credits	Grade:
Total Credits	7 total credits	

Required Mathematics Courses – 8 credits

MATH 182 Calculus II	4 credits	Grade:
MATH 283 Calculus III	4 credits	Grade:
Total Credits	8 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 430 Math 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:
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	
MATH 181 Calculus I (Category C2)	4 credits	Grade:
CHEM 100 General Chemistry I (Category C3)	4 credits	Grade:
1 ENGL Literature Course (Category D)	3 credits	Grade:

Summary of Graduation Requirements

Total credits from major courses	78
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 Physics 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	BIOL 104 (Category C1)	4 CH.	Selection:
Gen Ed	FYSM 100	3 CH.	Selection: FYSM 100 -
Gen Ed	EDUC 100 (Category B)	3 CH.	Selection:
Gen Ed	MATH 181 (Category C2)	4 CH.	Selection:
Total		17 CH.	

Second Semester Plan

Gen Ed	Category A2	3 CH.	Selection:
Gen Ed	SPEE 201 (Category B)	3 CH.	Selection:
Gen Ed	CHEM 100 (Category C3)	3 CH.	Selection:
Major	Required Content Area Course	3 or 4 CH.	Selection:
Major	Required Content Area Course	3 or 4 CH.	Selection:
Total		15-17 CH.	

Third Semester Plan

Gen Ed	Category A3	3 CH.	Selection:
Gen Ed	ENGL Literature (Category D)	3 CH.	Selection:
Major	Required Content Area Course	3 or 4 CH.	Selection:
Major	Required Content Area Course	3 or 4 CH.	Selection:
Major	Required Content Area Course	3 or 4 CH.	Selection:
Total		15-18 CH.	

Fourth Semester Plan

Gen Ed	SPEE 314 (Category B)	3 CH.	Selection:
Gen Ed	Category A4	3 CH.	Selection:
Gen Ed	Category D	3 CH.	Selection:
Major	Required Content Area Course	3 or 4 CH.	Selection:
Major	Required Content Area Course	3 or 4 CH.	Selection:
Total		15-17 CH.	

Fifth Semester Plan

Gen Ed	Category D	3 CH.	Selection:
Major	SEED 312	3 CH.	Selection:
Major	SEED 313	3 CH.	Selection:
Major	Required Content Area Course	3 or 4 CH.	Selection:
Major	Required Content Area Course	3 or 4 CH.	Selection:
Total		15-17 CH.	

Sixth Semester Plan

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

Seventh Semester Plan

Major	SEED 430	3 CH.	Selection:
Major	Required Content Area Course	3 or 4 CH.	Selection:
Major	Required Content Area Course	3 or 4 CH.	Selection:
Major	Required Content Area 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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