

PHYSICS: PHYSICS TEACHING, BSLAS

for the degree of Bachelor of Science in Liberal Arts and Sciences: Major in Physics (Sciences and Letters), Physics Teaching Concentration

department website: <https://physics.illinois.edu/>

department faculty: Physics Faculty (<https://physics.illinois.edu/people/directory/>)

overview of college admissions & requirements: Liberal Arts & Sciences (<http://catalog.illinois.edu/schools/las/academic-units/>)

college website: <https://las.illinois.edu/>

email: undergrad@physics.illinois.edu

No longer accepting applications Fall 2022

This concentration fulfills state certification requirements to teach high school physics (grades 9-12) through the AP/honors level and general science (high school biology, chemistry, earth and space science, and environmental science up to but not including the AP/honors level).

Time to degree completion varies. Minimum time to completion is 8 semesters, some students may require 10 semesters. Transfer students may need 10 total semesters combined to complete the program. Please see the LAS section in the transfer handbook for more information.

for the degree of Bachelor of Science in Liberal Arts and Sciences, Major in Physics (Sciences and Letters), Physics Teaching Concentration

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Departmental distinction: Distinction is determined by a combination of grade point average and achievement in student teaching. The student's practice teaching experience will be evaluated by the departmental honors adviser and the teaching supervisor. Distinction requires a 3.2 grade point average; high distinction, 3.4; highest distinction, 3.6. Students desiring distinction should consult with the departmental honors adviser during the junior year.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu/>) requirements including the campus general education language requirement.

Minimum required major and supporting course work: Minimum required major and supporting course work normally equates to 65-73 hours. Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

Teacher Education requirements: Students in this concentration must complete the Teacher Education Minor in Secondary School Teaching. See the College of Education section for requirements of the minor (<http://catalog.illinois.edu/undergraduate/education/secondary/>) (39 hours).

GPA requirements: To remain in good standing in this program and be recommended for certification, candidates are required to maintain UIUC, cumulative, content area, and professional education, grade-point averages of 2.5 (A= 4.0). Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages. <http://www.cote.illinois.edu/>

Minimum hours required for graduation: 120 hours.

Code	Title	Hours
Foundation Courses		
The following courses must be completed or in progress when students apply to the Secondary Education minor.		
MATH 221 or MATH 220	Calculus I ¹ Calculus	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285 or MATH 286	Intro Differential Equations Intro to Differential Eq Plus	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2
PHYS 214	Univ Physics: Quantum Physics	2
Select one group of Chemistry courses:		4-5

CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	
or		
CHEM 202 & CHEM 203	Accelerated Chemistry I and Accelerated Chemistry Lab I	

Additional required coursework

Teacher Education Minor in Secondary School Teaching (<http://catalog.illinois.edu/undergraduate/education/secondary/>) 39

Physics Core

PHYS 110	Physics Careers	0
PHYS 325	Classical Mechanics I	3
PHYS 435	Electromagnetic Fields I	3
PHYS 485 or PHYS 486	Atomic Phys & Quantum Theory Quantum Physics I	3

Choose at least three courses from List A and List B below. At least one course must come from List B. 9-14

A

PHYS 326	Classical Mechanics II	
PHYS 436	Electromagnetic Fields II	
PHYS 427	Thermal & Statistical Physics	
PHYS 470	Subatomic Physics	
PHYS 487	Quantum Physics II	
PHYS 460	Condensed Matter Physics	
PHYS 475	Introduction to Biophysics	

B

PHYS 401	Classical Physics Lab	
PHYS 403	Modern Experimental Physics	
PHYS 404	Electronic Circuits	
PHYS 406	Acoustical Physics of Music	

Additional Technical Courses

IB 100	Biology in Today's World	3
GEOL 107	Physical Geology	4
ASTR 210	Introduction to Astrophysics	3

1

MATH 220 may be substituted with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Requirements for the Teacher Education in Secondary School Teaching Minor

Code	Title	Hours
Professional Education Required Courses		
EDUC 201	Identity and Difference in Education ¹	3
EDUC 202	Social Justice, School and Society ¹	3
CI 401	Introductory Teaching in a Diverse Society	3
CI 403	Teaching a Diverse High School Student Population	3
CI 404	Teaching and Assessing Secondary School Students	3
CI 473	Disciplinary Literacy	3
EPSY 201	Educational Psychology ^{1,2}	3
EPSY 485	Assessing Student Performance	3
SPED 405	General Educator's Role in Special Education	3
EDPR 442	Educational Practice in Secondary Education	12
Total Hours		39-40

1

EDUC 201, EDUC 202 and EPSY 201 can be completed at any time during the degree and are not pre-requisites to apply for the minor.

2

PSYC 100 is a pre-requisite for EPSY 201.