

# 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

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
<b>Foundation Courses</b>		
The following courses must be completed or in progress when students apply to the Secondary Education minor.		
MATH 221 or MATH 220	Calculus I <sup>1</sup> 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 or CHEM 202 & CHEM 203	General Chemistry I and General Chemistry Lab I  Accelerated Chemistry I and Accelerated Chemistry Lab I	
<b>Additional required coursework</b>		
Teacher Education Minor in Secondary School Teaching ( <a href="http://catalog.illinois.edu/undergraduate/education/secondary/">http://catalog.illinois.edu/undergraduate/education/secondary/</a> )		39
<b>Physics Core</b>		
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

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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
<b>Professional Education Required Courses</b>		
EDUC 201	Identity and Difference in Education <sup>1</sup>	3
EDUC 202	Social Justice, School and Society <sup>1</sup>	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 <sup>1,2</sup>	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
<b>Total Hours</b>		<b>39-40</b>

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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.

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PSYC 100 is a pre-requisite for EPSY 201.