



INDIANA UNIVERSITY

SCHOOL OF EDUCATION
Office of Teacher Education
Bloomington

B.S. EDUCATION: SCIENCE (PHYSICS)

This Bachelor of Science in Education degree enables you to teach Middle School/Junior High or High School students. Course requirements for this program are valid at IUB as reflected in the School of Education Bulletin. A 4 year college plan requires completion of 15-16 credits each semester. A 2.5 GPA overall is required for retention and graduation.

General Education	36
Content	41-43
Professional Education	48
<u>Electives</u>	<u>XX</u>
Total (124 Minimum)	124

June 2009

ADMISSION TO TEACHER EDUCATION PROGRAM

1. Passing scores on the PRAXIS I test (175 Math, 176 Reading, 172 Writing). **Recommended:** Take the test during your Freshman year or as soon as you decide to become an Education major.
2. 2.5 GPA overall.
3. 21 credits and a 2.5 GPA in the content field with at least 15 credits completed and 6 credits in progress. Grade of C or higher is required in each content field course.
4. Completion of or enrollment in prerequisites: Grade of C or higher is required in each EDUC course.

EDUC-M 300	<i>Teaching in a Pluralistic Society</i>	3
EDUC-P 312	<i>Learning Theory into Practice</i> AND	3
EDUC-P 313	<i>Adolescents in a Learning Community</i>	3
EDUC-W 200	<i>Using Computers in Education</i>	3
5. Apply by October 1 for Spring Semester Block I courses. NOTE: Competitive enrollment with a limited number of seats in Block I.
6. Submit TEP Application Online:
<https://info.educ.indiana.edu/teachered/>

OVERALL PROGRAM REQUIREMENTS (Retention, Student Teaching & Graduation)

- A "C" or higher grade in each professional education and content field course is required.
- All professional education courses must be completed before student teaching.
- A 2.5 GPA in the professional education, content field and overall is required.
- A minimum of 124 college credits must be completed.

REMINDERS

- PRAXIS I scores take 4-6 weeks for results to be reported.
- Apply by October 1 for Spring Semester Block I courses.
- Register for Student Teaching 1 year in advance of enrollment.
- Apply for Graduation 1 year in advance of completion.
- Register with Education Careers Services during Senior Year.
- Attend Pre-Professional Meeting the semester before Student Teaching.
- Register for PRAXIS II in subject areas in Senior Year.
- Complete CPR/First Aid Requirement for State in Senior Year.
- Apply through IUB to State for License upon Graduation.

I. GENERAL EDUCATION

36 credits

(Careful selection & completion of courses with a "C" or higher grade may allow double counting in General Education & Content Field.)

ARTS & HUMANITIES **15 credits**

ORAL EXPRESSION (C or higher) **3 credits**

CMCL-C 121	<i>Public Speaking</i>	3
CMCL-C 122	<i>Interpersonal Communication</i>	3
EDUC-G 203	<i>Communication in the Classroom</i>	3

WRITTEN EXPRESSION (C or higher) **3 credits**

ENG-W 131	<i>Elementary Composition</i>	3
ENG-W 170	<i>Projects in Reading and Writing</i>	3

INTENSIVE WRITING **3 credits**

Refer to the online Schedule of Classes/Special Course Listings: Intensive Writing Courses.

REMAINING ARTS & HUMANITIES **6 credits**

Select 6 credits from A&H* (Arts & Humanities) courses.

NATURAL & MATHEMATICAL SCIENCES **9 credits**

Select 9 credits from N&M* (Natural & Mathematical) courses.

SOCIAL & HISTORICAL STUDIES **9 credits**

Select 9 credits from S&H* (Social & Historical Studies) courses.

CULTURE STUDIES **3 credits**

Select 3 credits from Culture Studies Requirement List A or B**.

*See College of Arts & Sciences Bulletin, Appendix II: Approved Distribution Courses and major specific planning sheet for recommended selections.

**See College of Arts & Sciences Bulletin, Appendix I: Cultural Studies Requirement Lists.

II. PHYSICS REQUIREMENTS**41-43 credits/2.5 GPA****(C or higher grade is required in each course.)**

REQUIRED		38-40 credits
BIOL-L 111	<i>Intro to Biol: Evolution & Diversity</i> OR	3
BIOL-L 112	<i>Intro to Biol: Biological Mechanisms (P: HS or college chemistry)</i>	
CHEM-C 117	<i>Principles of Chemistry & Biochemistry I – (P: Chemistry & Math Placement Exams & consent of department)</i>	5
CHEM-C 118	<i>Principles of Chemistry & Biochemistry II (P: C117 or C105/C125 & consent of department) (Fall only)</i> OR	5
CHEM-R 340	<i>Survey of Organic Chemistry (P: C117 or C106)</i>	(3)
GEOG-G 103	<i>Earth Science: Materials & Processes</i> OR	3
GEOG-G 104	<i>Evolution of the Earth</i> OR	
GEOG-G 105	<i>Earth: Our Habitable Planet</i> OR	
HPSC-X 100	<i>Human Perspectives on Science</i> OR	3
HPSC-X 102	<i>Revolutions in Science: Plato to NATO</i> OR	
HPSC-X 200	<i>Scientific Reasoning</i> OR	
HPSC-X 222	<i>Big Science in the 20th Century</i>	
PHYS-P 201	<i>General Physics I (P: MATH-M026 or HS equiv.)</i> AND	5
PHYS-P 202	<i>General Physics II (P: P201 or HS equiv.)</i> OR	5
PHYS-P 221	<i>Physics I (C: MATH-M211)</i> AND	
PHYS-P 222	<i>Physics II (C: MATH-M212, P: P221)</i>	
PHYS-P 301	<i>Physics III (P: P202 or P222)</i>	3
PHYS-P 309	<i>Modern Physics Lab (P/C: P301)</i>	2
PHYS-P 310	<i>Environmental Physics (P: P201 or P221 & MATH-M211)</i>	3
PHYS-P 331	<i>Theory of Electricity & Magnetism I (P: P202 or P222 & MATH-M312) (Fall only)</i>	3
ELECTIVE		3 credits
AST-A 221	<i>General Astronomy I (P: College Algebra & Trigonometry) (Fall only)</i>	4
AST-A 222	<i>General Astronomy II (P: College Algebra & Trigonometry, AST-A221) (Spring only)</i>	4
AST-A 320	<i>Computational Problems in Astronomy (P: A201-A202 or A221-A222, MATH-M212 & PHYS-P221-P222)</i>	3
GEOG-G 304	<i>Physical Meteorology & Climatology</i>	3
GEOG-G 336	<i>Remote Sensing (P: Consent of instructor)</i>	3
GEOG-G 350	<i>Instrumentation & Field Methods in Atmospheric Science (P/C: G304 or Consent of instructor)</i>	3
GEOG-G 431	<i>Dynamic Meteorology (P: MATH-M211-M212, PHYS P201 or P221, (P221 recommended & GEOG G304)</i>	3
GEOG-G 433	<i>Synoptic Meteorology (P: G304)</i>	3
PHYS-P 332	<i>Theory of Electricity & Magnetism II (P: P331) (Spring only)</i>	3
PHYS-P 340	<i>Thermodynamics & Stat. Mechanics (P: P202 or P222 & MATH-M311 concurrently)</i>	3
PHYS-P 400	<i>Analog & Digital Electronics</i>	3
PHYS-P 410	<i>Computing Apps. in Physics (P: P332 & CSCI-C301)</i>	3
PHYS-P 441	<i>Analytical Mechanics I (P: P201-P202 or P221-P222) (C: MATH-M343) (Fall only)</i>	3
PHYS-P 451	<i>Exp. in Modern Physics I (P: P301 & P309) (R: P453-P454 concurrently) (Fall only)</i>	3
PHYS-P 453	<i>Intro. To Quantum Mechanics (P: P301 & P331) (R: P332 concurrently) (Fall only)</i>	3
PHYS-P 460	<i>Modern Optics (P: P331)</i>	3

III. PROFESSIONAL EDUCATION**48 credits/2.5 GPA****(C or higher grade is required in each course.)**

REQUIRED NON-AUTHORIZED COURSES		3 credits
This course must be taken before student teaching:		
EDUC-H 340	<i>Education & American Culture</i>	3
PREREQUISITE EDUCATION COURSES		12 credits
These courses must be taken before admission to the TEP.		
EDUC-M 300	<i>Teaching in a Pluralistic Society</i>	3
EDUC-P 312	<i>Learning Theory into Practice</i> AND	3
EDUC-P 313	<i>Adolescents in a Learning Community</i>	3
EDUC-W 200	<i>Using Computers in Education</i>	3
PRAXIS I Admission Tests (175 Math, 176 Reading, 172 Writing)		
TEACHER EDUCATION PROGRAM		33 credits
Admission to TEP is required for remaining courses.		
These courses must be taken before student teaching. (A308 may be taken with Block I or Block II. K306 is recommended with Block II.)		
EDUC-A 308	<i>School Law: Secondary</i>	3
EDUC-K 306	<i>Teaching Students with Special Needs: Secondary Classrooms</i>	3
Courses must be taken in prescribed blocks. Successful completion of all courses in each Block is a prerequisite for the next Block and student teaching.		
Block I and Block II must be successfully completed (C or Better) in sequence without interruption from one semester to the next. Students may add an additional semester(s) between the completion of Block II and Student Teaching (Block III).		
BLOCK I (Spring only)		8 credits
EDUC-M 346	<i>Exploring School Science Teaching</i>	3
EDUC-M 303	<i>Field Experience I</i>	2
EDUC-M 469	<i>Content Area Literacy</i>	3
BLOCK II (Fall only)		6 credits
EDUC-M 446	<i>Methods of Teaching Jr/Md/Sr High Science</i>	3
EDUC-M 403	<i>Field Experience II</i>	2
EDUC-S 303	<i>Classroom Management/Sec.</i>	1
BLOCK III (Student Teaching)		13 credits
EDUC-M 420	<i>Professional Development Seminar</i>	1
EDUC-M 480	<i>Student Teaching</i>	12
IV. ELECTIVES (To Total 124 credits)		