This program sheet is effective for all students starting at IUB beginning summer 2017.



## **B.S. EDUCATION: SCIENCE (PHYSICS)**

## **INDIANA UNIVERSITY**

SCHOOL OF EDUCATION Office of Teacher Education Bloomington

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 four year college plan requires completion of 15 credits each semester. A 2.5 GPA overall is required for retention and graduation. A total of 120 credits are required for graduation.

May 2017

6 credits

PRE	REQUISITES FOR ADMISSION TO THE TEP	
	ve enrollment. Meeting minimum requirements does no	ot
	guarantee enrollment in authorized courses.	
1. Complete t	the basic skills testing requirement by using any of the	
following o	ptions:	
<ul> <li>Qualifyir</li> </ul>	ng scores on CASA	
	ading 220, Math 220, Writing 220	
	mbined MA+VE score of at least 1100 if test taken prior	' to
March 1		
	mbined MA+VE score of at least 1170 if test taken on o	r
	rch 1, 2016	
	mposite score of at least 24	
	of EN + MA + RE + SR scores divided by 4 = 24	
2. 2.5 GPA of	verall. and a 2.5 GPA in the content field with at least 15 credi	ite
	and a 2.5 GFA in the content field with at least 15 clear and 6 credits in progress. Grade of C minus or higher	
	each content field course.	13
	n of or enrollment in prerequisites: Grade of C or higher	r is
	each EDUC course.	
Course	<u>Cr</u>	edits
<ul> <li>EDUC-N</li> </ul>	1 300 Teaching in a Pluralistic Society (D)	3
<ul> <li>EDUC-F</li> </ul>		3
<ul> <li>EDUC-F</li> </ul>		3
<ul> <li>EDUC-V</li> </ul>		3
	EP by October 1 to enroll in Spring term Block I and	
EDUC-K 3	06.	
0 A TE		
GE	P Application at: http://education.indiana.edu/	
GE <u>http</u> Careful sele may allow	I. IUB & SCHOOL OF EDUCATION NERAL EDUCATION REQUIREMENTS ://gened.iub.edu/courses/genedcourses.html ction & completion of courses with a grade of "C" or hig double counting within General Education, Profession	al
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GE http Careful sele may allow Education &/ Oral Expres Grade of C or ANTH-A 122	I. IUB & SCHOOL OF EDUCATION NERAL EDUCATION REQUIREMENTS ://gened.iub.edu/courses/genedcourses.html ction & completion of courses with a grade of "C" or hig double counting within General Education, Professiona or Content Field. If you earn a grade lower than a C, ple consult with an academic advisor. sion (Select one) thigher required 3 cm Interpersonal Communication (S&H)	al ease edits
GE http Careful sele may allow Education &/ Oral Expres Grade of C or ANTH-A 122 COLL-P 155	I. IUB & SCHOOL OF EDUCATION NERAL EDUCATION REQUIREMENTS ://gened.iub.edu/courses/genedcourses.html ction & completion of courses with a grade of "C" or hig double counting within General Education, Professiona or Content Field. If you earn a grade lower than a C, ple consult with an academic advisor. sion (Select one) thigher required Interpersonal Communication (S&H) Public Oral Communication	al ease edits 3 3
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Mathematical Modeling (MM) (Select one)		3-4 credits
MATH-M/S/V 118	Finite Mathematics	3
MATH-D 116	Intro to Finite Mathematics / AND	2
MATH-D 117	Intro to Finite Mathematics II (P: D116)	2
MATH-M 106	Math of Decision and Beauty	3
MATH-J 113	Intro to Calculus with Applications	3
MATH-M 119	Brief Survey of Calculus I	3
MATH-M/S 211	Calculus I	4
Arts & Humanities (A&H)		6 credits

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## Arts & Humanities (A&H)

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Complete at least 2 courses for a total of at least 6 credits.

Social & Historical Studies (S&H)

Complete at least 2 courses for a total of at least 6 credits.

Natural & Mathematical Sciences (N&M) 5+ credits Complete ONE of the following options.

Option I: Complete at least 2 courses for a total of at least 5 credits. At least 1 of these courses must be a Natural Science (\*) course.

Option II: Complete a 5 credit science course.

(The class taken to fulfill the Mathematical Modeling requirement cannot be counted towards the 5+ credits needed to fulfill the N&M requirement.)

World Languages (WL)/World Cultures (WC)	6 credits
Complete ONE of the following options.	o creans

Option I: Language Study (WL): Complete the study of an approved single language through the second semester of the second-year level of college-level coursework.

Option II: World Culture (WC): Complete at least 2 courses for a total of at least 6 credits.

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Option III: International Experience (IE): Complete an approved study abroad program or internship of at least 6 credits & at least 6 weeks abroad in duration.

Information FI	uency (IF)	3 credits		
EDUC-W 200	Using Computers in Education	3		
Diversity in the	e U. S. (D)	3 credits		
EDUC-M 300	Teaching in a Pluralistic Society (P: Soph. stat	us) 3		
Enriching Edu	cational Experiences (EEE)	12 credits		
EDUC-M 480	Student Teaching: Secondary (12 weeks)	12		
II. PROFESSIONAL EDUCATION 48 credits/2.5 GPA A grade of C or higher is required in each EDUC course. The following courses must be successfully completed before student teaching.				
		18 credits		
EDUC-M 300	Teaching in a Pluralistic Society (P: Soph. status) <b>(D)</b>	3		
EDUC-P 312 EDUC-P 313	Learning Theory into Practice (P: Soph. statu Adolescents in a Learning Community (P: Soph. status)	is) 3 3		
EDUC-W 200 EDUC-A 308	Using Computers in Education (IF) Legal & Ethical Issues for Teachers (P: Soph. status)	3 3		
EDUC-H 205	Intro to Educational Thought (P: English com (S&H) (IW) OR	p) 3		
EDUC-H 340		3		
Admission to th required in orde	e Teacher Education Program (TEP) is	30 credits		
EDUC-K 306	Teaching Students with Special Needs: Secondary Classrooms	3		
completion (C o	Courses must be taken in prescribed blocks. Successful completion (C or higher) of all courses in each block is a prerequisite for the next block and student teaching.			
interruption, fro	ck II must be completed in sequence, witho m one semester to the next. Students may ster(s) between the completion of Block II a ng (Block III).	add an		
BLOCK I (Spring EDUC-M 346 EDUC-M 303 EDUC-M 469	<mark>g only)</mark> Exploring Secondary School Science Teach Field Experience I Content Area Literacy	8 credits ing 3 2 3		
BLOCK II (Fall o EDUC-M 446	nly) Methods of Teaching Jr/Middle/Sr High Scho Science	<u>6 credits</u> ool 3		
EDUC-M 403 EDUC-S 303	Field Experience II Classroom Management	2 1		
	ent Teaching) ot enroll in other classes while completing otion: EDUC-M 202 Job Search Strategies for Student Teaching Seminar Student Teaching in the Secondary School (12 weeks) (EEE)			

## III. PHYSICS CONTENT 53 credits/2.5 GPA

A grade of C minus or higher is required in each course. Check with the department regarding when courses will be offered.

Required Scien	ce & Mathematics	23 credits
BIOL-E/L 111	Foundations of Biology: Diversity, Evolution	& 4
	Ecology (N&M) OR	
BIOL-E/L 112	Foundations of Biology: Biological	4
	Mechanisms (P: HS or college chemistr	y)
	(N&M)	
CHEM-C 117	Principles of Chem & Biochem I (P: CHEM	& 3
	MATH Placement & consent of Dept) (N&M	)
GEOL-G/S 103	Earth Sci: Materials & Processes (N&M) O	<b>R</b> 3
GEOL-G 104	Evolution of the Earth (N&M) OR	3
GEOL-G 105	Earth: Our Habitable Planet (N&M)	3
HPSC-X 102	Science Revolutions: Plato to NATO	3
	(S&H) (WC) OR	
HPSC-X 222	Big Science in the 20 <sup>th</sup> Century (S&H)	3
MATH-M/S 211	Calculus I (N&M) (MM)	4
MATH-M/S 212	Calculus II (P: M/S 211) (N&M)	4
MATH-M/S 343	Intro to Differential Equations I (P: M/S 212,	) 3
Physics Major		30 credits
PHYS-P 201	General Physics I	5
	(P: MATH-M 26 or HS equiv.) (N&M) AND	Ŭ

201		0
	(P: MATH-M 26 or HS equiv.) (N&M) AND	
PHYS-P 202	General Physics II	5
	(P: P 201 or HS equiv.) (N&M) OR	
PHYS-P/H 221	Physics I (C: MATH-M/S 211) AND	5
PHYS-P/H 222	Physics II (C: MATH-M/S 212, P: P 221)	5
PHYS-P 301	Physics III	3
	(P: P 222 or P 202 with consent of instructor)	

Complete <u>17 credits</u> in Physics at the 300-400 level from the Physics department course listing:

•	 2	2+
•		3
•		3
•		3
•		3
•		3

IV. ELECTIVES (To total 120 credits)