

This program sheet is effective for all students starting at IUB beginning summer 2018.



INDIANA UNIVERSITY

SCHOOL OF EDUCATION
Office of Teacher Education
Bloomington

B.S. EDUCATION: SCIENCE (CHEMISTRY)

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 15-16 credits each semester. A 2.5 GPA overall is required for retention and graduation. A total of 120 credits are required for graduation.

May 2018

PREREQUISITES FOR ADMISSION TO THE TEP

Competitive enrollment. Meeting minimum requirements does not guarantee enrollment in authorized courses.

- Complete the basic skills testing requirement by using any of the following options:
 - Qualifying scores on CASA
Reading 220, Math 220, Writing 220
 - SAT combined MA+VE score of at least 1100 if test taken prior to March 1, 2016
 - SAT combined MA+VE score of at least 1170 if test taken on or after March 1, 2016
 - ACT composite score of at least 24
Sum of EN + MA + RE + SR scores divided by 4 = 24
- 2.5 GPA overall.
- 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 minus (C-) or higher is required in each content field course.
- Completion of or enrollment in prerequisites: Grade of C or higher is required in each EDUC course.

Courses		Credits
• EDUC-G 203	Communication for Youth Serving Professionals (S&H)	3
• EDUC-M 300	Teaching in a Pluralistic Society (P: English Comp.) (D)	3
• EDUC-P 312	Learning Theory into Practice (P: Soph. status)	3
• EDUC-P 313	Adolescents in a Learning Community (P: Soph. status)	3
• EDUC-W 200	Using Computers in Education (IF)	3

- Apply to TEP by October 1 to enroll in Spring term Block I and EDUC-K 306.
- Access TEP Application at: <https://education.indiana.edu/>

I. IUB & SCHOOL OF EDUCATION GENERAL EDUCATION REQUIREMENTS

<https://gened.indiana.edu/approved-courses/index.html>

Careful selection & completion of courses with a grade of "C" or higher may allow double counting within General Education, Professional Education &/or Content Field. If you earn a grade lower than a C, please consult with an academic advisor.

English Composition (EC) (Select one) 0-3 credits Grade of C or higher required

CMLT-C 110	Writing the World	3
ENG-W 131	Reading, Writing & Inquiry I OR	3
ENG-W 131EX	Elementary Composition-Exempt	0
ENG-W 170	Intro to Argumentative Writing-Projects in Reading & Writing	3

Intensive Writing Course (IW) (Select one) 3 credits

EDUC-H 205	Intro to Educational Thought (P: English Comp.) (S&H)	3
EDUC-H 340	Education & American Culture (P: Soph. status)	3

Mathematical Modeling (MM) 3-4 credits

Complete at least 1 course for at least 3 credits.

• _____

Arts & Humanities (A&H) 6 credits

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

• _____ • _____

Social & Historical Studies (S&H) 6 credits

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.

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.

• _____ • _____

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 Fluency (IF) 3 credits

EDUC-W 200	Using Computers in Education	3
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Diversity in the U. S. (D) 3 credits

EDUC-M 300	Teaching in a Pluralistic Society (P: English Comp.)	3
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Enriching Educational Experiences (EEE) 12 credits

EDUC-M 480	Student Teaching: Secondary (12 weeks)	12
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II. PROFESSIONAL EDUCATION**51 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.

21 credits

EDUC-G 203	Communication for Youth Serving Professionals (S&H)	3
EDUC-M 300	Teaching in a Pluralistic Society (P: English Comp.) (D)	3
EDUC-P 312	Learning Theory into Practice (P: Soph. status)	3
EDUC-P 313	Adolescents in a Learning Community (P: Soph. status)	3
EDUC-W 200	Using Computers in Education (IF)	3
EDUC-A 308	Legal & Ethical Issues for Teachers (P: Soph. status)	3
EDUC-H 205	Intro to Educational Thought (P: English comp) (S&H) (IW) OR	3
EDUC-H 340	Education & American Culture (P: Soph. status) (IW)	3

Admission to the Teacher Education Program (TEP) is required in order to enroll in the following courses: 30 credits

EDUC-K 306	Teaching Students with Special Needs: Secondary Classrooms	3
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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.

Block I and Block II must be completed in sequence 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	Exploring Secondary School Science Teaching	3
EDUC-M 303	Field Experience I	2
EDUC-M 469	Content Area Literacy	3

Block II (Fall only) 6 credits

EDUC-M 446	Methods of Teaching Jr/Middle/Sr High School Science	3
EDUC-M 403	Field Experience II	2
EDUC-S 303	Classroom Management	1

Block III (Student Teaching) 13 credits

Students may not enroll in other classes while completing student teaching. Exception: EDUC-M 202 Job Search Strategies for Educators

EDUC-M 420	Student Teaching Seminar	1
EDUC-M 480	Student Teaching in the Secondary School (12 weeks) (EEE)	12

III. CHEMISTRY CONTENT**50 credits/2.5 GPA**

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

Required Science 20 credits

BIOL-L 111	Foundations of Biology: Diversity, Evolution & Ecology (N&M) OR	4
BIOL-L 112	Foundations of Biology: Biological Mechanisms (P: HS/College Chem) (N&M)	4
EAS-E 103	Earth Science: Mat. & Processes (N&M) OR	3
EAS-E 104	Evolution of the Earth (N&M) OR	3
EAS-E 105	Earth: Our Habitable Planet (N&M)	3
HPSC-X 102	Science Rev.: Plato to NATO (S&H) (WC)	3
PHYS-P 201	General Physics I (P: MATH-M026 or HS equiv.) (N&M) AND	5
PHYS-P 202	Gen. Phys. II (P: P201 or HS equiv.) (N&M) OR	5
PHYS-P 221	Physics I (C: MATH-M/S 211) AND	5
PHYS-P 222	Physics II (C: MATH-M/S 212, P: P221)	5

Chemistry Major**30 credits**

CHEM-C 117	Principles of Chem & Biochem I (P: C101-C121 or CHEM-C103, or chemistry and math placement examinations and consent of department) (N&M) AND	3
CHEM-C 127	Principles of Chem & Biochem I Lab OR	2
CHEM-S 117	Principles of Chem & Biochem I-Honors	5
CHEM-C/S 341	Organic Chem I Lectures (P: C117 or C243)	3
CHEM-C/S 342	Organic Chem II Lectures (P: C/S341)	3
CHEM-C/S 343	Organic Chem I Lab (P: C127 and C341. R: C342 or S342.)	2
CHEM-C 360	Introductory Physical Chemistry (P: C117 or S117, and MATH-M119 and PHYS-P201 or equiv. R: N330). OR	3
CHEM-C 361	Physical Chem of Bulk Matter (P: C117 or S117, MATH-M 212, PHYS-202 or P222) OR	
CHEM-C 362	Physical Chem of Molecules (P: C117 or S117, MATH-M212, PHYS-P202 or P222. R: N330.)	

Complete 14 credits from the following:

CHEM-N 330	Intermediate Inorganic Chem (P: C/S342 or R340; and C/S343)	5
CHEM-C 317	Equilibria and Electrochemistry (P/C: C/S341 & MATH-M211) OR	2
CHEM-C 318	Spectrochemistry and Separations (P/C: C/S 341 & MATH-M211)	2
CHEM-A 315	Chemical Measurements Lab (P: A314 or C317-C318) OR	2
CHEM-A 316	Bioanalytical Chem Lab (P: A318 or C317-C318 or P/C: A314)	2
CHEM-C 344	Organic Chem II Lab (P C/S342 & C/S343)	2
CHEM-P 364	Basic Measurements in Physical Chemistry (P: C361)	2
CHEM-P 464	Advanced Measurements in Physical Chemistry (P: P364. P/C: C362)	2
CHEM-C 416	Surface Analysis and Surface Chemistry (P: C360 or C361 or permission of instructor)	3
CHEM-C 420	Advanced and Nanoscale Materials (P: CHEM-C 343, C360 or C361. R: N 330 and/or C483 or C484.)	3
CHEM-C 430	Inorganic Chemistry (P: C106 or N330. R: C362)	3
CHEM-C 432	Spectroscopic Methods in Inorganic Chemistry (P: C360 or C361, and C430)	3
CHEM-C 437	Inorganic Chemistry Lab (P: N330)	2
CHEM-C 443	Organic Spectroscopy (P: C/S342 and C/S343)	3
CHEM-C 446	Organic Chemistry III (P: C/S 342)	3
CHEM-C 460	Nuclear Chemistry (P: C360 or C361)	3
CHEM-C 481	Physical Biochemistry (P: C361 & C484)	3
CHEM-C 483	Biological Chem (P: C/S342 or R340) OR	3
CHEM-C 484	Biomolecules & Catabolism (P: C/S342)	3
CHEM-C 485	Biosynthetic Pathways and Control of Metabolism (P: C484)	3
CHEM-B 486	Gene Expression and Physiology (P: C484 or permission of instructor)	3
CHEM-B 487	Biochemistry Laboratory (P: C/S 343 and C484. P/C: C485)	2
CHEM-B 488	Advanced Biochemistry Laboratory (P: B487. P/C: C485)	2

IV. ELECTIVES (To total 120 credits)