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

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 2017

PREREQUISITES FOR ADMISSION TO THE TEP

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

1. 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. 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 minus 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.

Courses		Credits
• EDUC-M 300	*Teaching in a Pluralistic Society* **(D)**	3
• EDUC-P 312	*Learning Theory into Practice*	3
• EDUC-P 313	*Adolescents in a Learning Community*	3
• EDUC-W 200	*Using Computers in Education* **(IF)**	3

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

I. IUB & SCHOOL OF EDUCATION GENERAL EDUCATION REQUIREMENTS

http://gened.iub.edu/courses/genedcourses.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.

Oral Expression (Select one) — 3 credits
Grade of C or higher required

ANTH-A 122	*Interpersonal Communication* **(S&H)**	3
COLL-P 155	*Public Oral Communication*	3
EDUC-G 203	*Comm. for Youth Serving Professionals* **(S&H)**	3

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: English comp & Soph. status)*	3

Mathematical Modeling (MM) (Select one) — 3-4 credits

MATH-M/S/V 118	*Finite Mathematics*	3
MATH-D 116	*Intro to Finite Mathematics I* **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 (Recommended)*	3
MATH-M/S 211	*Calculus I (Recommended)*	4

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

Diversity in the U. S. (D)		**3 credits**
EDUC-M 300	*Teaching in a Pluralistic Society (P: Soph. status)*	3

Enriching Educational 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)* **(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: English comp & 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

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, 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	*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
49 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 Science		**19 credits**
BIOL-E/L 111	*Foundations of Biology: Diversity, Evolution & Ecology* **(N&M) OR**	4
BIOL-E/L 112	*Foundations of Biology: Biological Mechanisms (P: HS/College Chem)* **(N&M)**	4
GEOL-G/S 103	*Earth Science: Mat. & Processes* **(N&M) OR**	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 Rev.: Plato to NATO* **(S&H) (WC) OR**	3
HPSC-X 222	*Big Science in 20th Century* **(S&H)**	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: CHEM & MATH Placement Exams & 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: C117/127 or S117)*	3
CHEM-C/S 342	*Organic Chem II Lectures (P: C/S341) (R: C343 Concurrently)*	3
CHEM-C/S 343	*Organic Chem I Lab (P: C341) (P/C: C342)*	2
CHEM-C 360	*Intro to Physical Chem (P: C117/127 or S117; N330 strongly recommended, MATH-M119, PHYS-P201 or equiv.)* **OR**	3
CHEM-C 361	*Physical Chem of Bulk Matter (P: C117/127 or S117, MATH-M/S 212, PHYS-202 or P222)* **OR**	
CHEM-C 362	*Physical Chem of Molecules (P: C117-127 or S117, N330 strongly recommended. MATH-M/S 212, PHYS-P202 or P222)*	

Complete 14 credits from the following:

CHEM-N 330	*Intermediate Inorganic Chem (P: C/S342 & R340)(P:C/S343)*	5
CHEM-C 317	*Equilibria & Electrochem (P/C: C/S341 & MATH-M/S 211)* **OR**	2
CHEM-C 318	*Spectrochem & Separations (P/C: C/S 341 & MATH-M211)*	2
CHEM-A 315	*Chemical Measurements Lab (P: C317 & C318 or A314)* **OR**	2
CHEM-A 316	*Bioanalytical Chem Lab (P: C317 & C318 or P/C: A314)*	2
CHEM-C/S 344	*Organic Chem II Lab (P C/S342 & C/S343)*	2
CHEM-C 364	*Intro to Basic Measurements (P: C/S361)* **OR**	3
CHEM-P 364	*Basic Measurements-Physical Chem (P:C/S361)*	2
CHEM-P 464	*Advanced Measurements-Physical Chem (P: P364. P/C: C362)*	2
CHEM-C 416	*Surface Analysis & Surface Chemistry (P: C360 or C361 or permission of instructor)*	3
CHEM-C 420	*Advanced & Nanoscale Materials (P: CHEM-C 343, C360 or C361) (R: CHEM-N 330 &/or C483 or C484)*	3
CHEM-C 430	*Inorganic Chem (P: C/S118 or N/S330 & C/S342) (R: C362)*	3
CHEM-C 432	*Spectroscopic Methods in Inorganic Chem (P: C360 or C361 & C430)*	3
CHEM-C 437	*Inorganic Chem Lab (P: C/S343 & C430)*	2
CHEM-C 443	*Organic Spectroscopy (P: C342 & C362)*	3
CHEM-C 446	*Organic Chemistry III (P: C342 or S342)*	3
CHEM-C 460	*Nuclear Chem (P/C: C360 & C/S361)*	3
CHEM-C 481	*Physical Biochem (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	*Biosynth. Path. & Control of Metabolism (P: C484)*	3
CHEM-C 486	*Gene Expression & Physiology (P: C484 or permission of instructor)*	3
CHEM-C 487	*Biochemistry Lab (P: C/S 343 and C484. P/C: C 485)*	2-3
CHEM-C 488	*Advanced Biochemistry Lab (P: B487. P/C: C 485)*	2

IV. ELECTIVES (To total 120 credits)