**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 4 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.

**ADMISSION REQUIREMENTS**

(Competitive enrollment. Meeting minimum requirements does not guarantee admission.)

1. Students may satisfy the Academic Skills Assessment requirement for admission to the TEP by using any of the following options:
   - Qualifying scores on CASA (taken after Sept. 1, 2013)
   - ACT composite score of at least 24
   - SAT combined scores of at least 1100
   - 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 or higher is required in each content field course.
4. Completion or enrollment in prerequisites: Grade of C or higher is required in each EDUC course.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC-M 300 Teaching in a Pluralistic Society (D)</td>
<td>3</td>
</tr>
<tr>
<td>EDUC-P 312 Learning Theory into Practice AND</td>
<td>3</td>
</tr>
<tr>
<td>EDUC-P 313 Adolescents in a Learning Community</td>
<td>3</td>
</tr>
<tr>
<td>EDUC-W 200 Using Computers in Education (IF)</td>
<td>3</td>
</tr>
</tbody>
</table>

5. Apply by October 1 for Spring Semester Block I courses.
6. Submit TEP Application Online: https://info.educ.indiana.edu/teachered/

**I. IUB & SCHOOL OF EDUCATION GENERAL EDUCATION REQUIREMENTS**

(http://gened.iub.edu/courses/ genedcourses.html)

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

<table>
<thead>
<tr>
<th>Oral Expression (Select one) (Grade of C or higher required)</th>
<th>3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMCL-C 121 Public Speaking (A&amp;H)</td>
<td>3</td>
</tr>
<tr>
<td>CMCL-C 122 Interpersonal Communication (S&amp;H)</td>
<td>3</td>
</tr>
<tr>
<td>EDUC-G 203 Communication in the Classroom (S&amp;H)</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>English Composition (EC) (Select one) (Grade of C or higher required)</th>
<th>0-3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMLT-C 110 Writing the World</td>
<td>3</td>
</tr>
<tr>
<td>ENG-W 131 Elementary Composition OR</td>
<td>3</td>
</tr>
<tr>
<td>ENG-W 131EX Elementary Composition-Exempt</td>
<td>0</td>
</tr>
<tr>
<td>ENG-W 170 Intro to Argumentative Writing (Topic: Projects in Reading &amp; Writing)</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intensive Writing Course (IW) (Select one)</th>
<th>3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC-H 205 Intro to Educational Thought (P: English Comp) (S&amp;H)</td>
<td>3</td>
</tr>
<tr>
<td>EDUC-H 340 Education &amp; American Culture (P: English Comp &amp; Soph. Standing)</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mathematical Modeling (MM) (Select one)</th>
<th>3-4 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH-M/S/V 118 Finite Mathematics 3</td>
<td></td>
</tr>
<tr>
<td>MATH-D 116 Intro to Finite Mathematics I AND 2</td>
<td></td>
</tr>
<tr>
<td>MATH-D 117 Intro to Finite Mathematics II (Note: D116 must have a grade of C- or higher &amp; D117 must have a passing grade to fulfill the MM requirement) 2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Arts &amp; Humanities (A&amp;H)</th>
<th>6 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete at least 2 courses for a total of at least 6 credits.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social &amp; Historical Studies (S&amp;H)</th>
<th>6 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete at least 2 courses for a total of at least 6 credits.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Natural &amp; Mathematical Sciences (N&amp;M) (Complete ONE of the following options.)</th>
<th>5+ credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Option II: Complete a 5 credit science course.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>World Languages (WL)/World Cultures (WC) (Complete ONE of the following options.)</th>
<th>6 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Option II: World Culture (WC): Complete at least 2 courses for a total of at least 6 credits.</td>
<td></td>
</tr>
<tr>
<td>Option III: International Experience (IE): Complete an approved study abroad program or internship of at least 6 credits &amp; at least 6 weeks abroad in duration.</td>
<td></td>
</tr>
</tbody>
</table>
Information Fluency (IF) 3 credits
EDUC-W 200 Using Computers in Education 3

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

Enriching Educational Experiences (EEE) 12 credits
EDUC-M 480 Student Teaching: Secondary 12

II. PROFESSIONAL EDUCATION 48 credits/2.5 GPA
(C or higher grade is required in each course listed below.)

Prerequisite Education Courses 12 credits
These courses must be taken before admission to the TEP.
EDUC-M 300 Teaching in a Pluralistic Society (P: Soph. Standing) [D] 3
EDUC-P 312 Learning Theory into Practice (P: Soph. Standing) AND 3
EDUC-P 313 Adolescents in a Learning Community (P: Soph. Standing) 3
EDUC-W 200 Using Computers in Education [IF] 3

Required Non-Approved Course 6 credits
EDUC-A 308 Legal & Ethical Issues in Education (P: Soph. Standing) 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. Standing) [IW] 3

Teacher Education Program 30 credits
Admission to TEP is required for remaining courses. These courses must be taken before student teaching.
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 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 3
EDUC-M 403 Field Experience II 2
EDUC-S 303 Classroom Management/Sec. 1

Block III (Student Teaching) 13 credits
EDUC-M 420 Professional Development Seminar 1
EDUC-M 480 Student Teaching (EEE) 12

III. CHEMISTRY CONTENT 46 credits/2.5 GPA
(C or higher grade is required in each course listed below.)
(See 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 3
BIOL-E/L 112 Foundations of Biology: Biological Mechanisms (P: HS/College Chem (N&M) 3
GEOL-G 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 Revol in Science: Plato—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 General Physics II (P: P201 or HS equiv.) (N&M) OR 5
PHYS-P 221 Physics I (C: MATH-M211) AND 5
PHYS-P 222 Physics II (C: MATH-M212, P: P221) 5

Chemistry Major 27 credits
CHEM-C 117 Principles of Chem & Biochem I (P: CHEM & MATH Placement & consent of Dept) (N&M) AND 3
CHEM-C 127 Principles of Chem & Biochem I Lab OR 2
CHEM-S 117 Principles of Chem & Biochem I-Fonors 5
CHEM-C/S 341 Organic Chem I Lectures (P: C117/127 or S117) 3
CHEM-C/S 342 Organic Chem II Lectures (P: C341) (R: C343) Concurrency) 3
CHEM-C/S 343 Organic Chem I Lab (P: C341) (P/C: C342) Concurrency) 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-M212, PHYS-P202 or P222) OR 3
CHEM-C 362 Physical Chem of Molecules (P: C117-127 or S117, N330 strongly recommended. MATH-M212, PHYS-P202 or P222) 3

Complete 11 credits from the following:
CHEM-C/S 118 Principles of Chem & Biochem II (P: C117/127 or S117) 5
CHEM-N 330 Intermediate Inorganic Chem (P: C/S342 or R340) (P: C/S343) [Strongly Recommended] 2
CHEM-A 314 Biol. & Envir. Chemical Analysis (P: C/S341 or R340) (P: MATH-M119 or M211) OR 2
CHEM-C 317 Equilibria and Electrochem (P/C: C/S341 & MATH-M211 or M215) AND 2
CHEM-C 318 Spectroscopy and Separations (P/C: C/S 341 and MATH-M211 or M215) 2
CHEM-A 315 Chemical Measurements Lab 2
CHEM-A 316 Bioanalytical Chem Lab (P: C317 & C318 or P/C: A314) 2
CHEM-C 344 Organic Chem II Lab (P C/S342 & C/S343) 2
CHEM-C 346 Intro to Basic Measurements (P: C/S361) OR 3
CHEM-P 364 Basic Measurements-Physical Chem (P: C/S361) AND 3
CHEM-P 464 Advanced Measurements-Physical Chem (P: P364, P/C: C362) 2
CHEM-C 430 Inorganic Chem (P: N/S330) (R: C362) 3
CHEM-C 432 Spectroscopic Methods in Inorganic Chem (P: C/S360 or C361 & C430) 3
CHEM-C 347 Inorganic Chem Lab (P: C/S343 & C430) 3
CHEM-C 443 Organic Spectroscopy (P: C342 & C362) 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 and Catalobolism (P: C/S342) AND 3
CHEM-C 485 Biosynthesis and Physiology (P: C484) 3

IV. ELECTIVES (To total 120 credits)