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.

PREREQUISITES FOR AUTHORIZED COURSES
(Competitive enrollment. Meeting minimum requirements does not guarantee enrollment in authorized courses.)

1. Students may satisfy the Academic Skills Assessment requirement by using any of the following options:
   - Qualifying scores on CASA
   - Reading 220, Math 220, Writing 220
   - SAT combined score of at least 1100
     - Sum of MA + VE = 1100
   - 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 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 AND | 3
EDUC-P 313 Adolescents in a Learning Community (To enroll in P312 and P313 you must register for EDUC-BE 312) | 3
EDUC-W 200 Using Computers in Education (IE) | 3

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.)

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 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. standing) 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-J 113 Intro to Calculus with Applications 3
MATH-M 119 Brief Survey of Calculus I (Recommended) 3
MATH-M 211 Calculus I (Recommended) 4
MATH-M 213 Accelerated Calculus 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

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.

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 Teach in a Pluralistic Society (P: Soph. standing) 3

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

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

TEP Prerequisite Education Courses 12 credits
EDUC-M 300 Teaching in a Pluralistic Society 3
( P: Soph. standing) (D)
EDUC-P 312 Learning Theory into Practice (P: Soph. standing) 3
AND
EDUC-P 313 Adolescents in a Learning Community 3
( P: Soph. standing) (To enroll in P312 and P313 you must register for EDUC-BE 312)
EDUC-W 200 Using Computers in Education (IF) 3

III. CHEMISTRY CONTENT
49 credits/2.5 GPA (C or higher grade is required in each course listed below.)
( Check with the department regarding when courses will be offered.)

Required Science 19 credits
BIOI-L/E 111 Foundations of Biology: Diversity, Evolution & Ecolo, (N&M) OR 3
BIOI-L/E 112 Foundations of Biology: Biological Mechanisms (P: HS/College Chem) (N&M) OR 3
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) OR 3
HPSC-X 102 Science Revolutions: Plato to NATO (S&W, WC) OR 3
HPSC-X 222 Big Science in 20th Century (S&W) 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 30 credits
CHEM-S 117 Principles of Chem & Biochem I-Honors 2
CHEM-C/S 341 Organic Chem I Lectures (P: C117/127 or S117) 5
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-S 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, N330 strongly recommended, MATH-M212, PHYS-P202 or P222) OR 5
CHEM-C 362 Physical Chem of Molecules (P: C117-127 or S117, N330 strongly recommended, MATH-M212, PHYS-P202 or P222) 5

Complete 14 credits from the following:
CHEM-C/S 118 Principles of Chem & Biochem II (P: C117/127 or S117) OR 2
CHEM-A 314 Biol. & Envr. Chemical Analysis (P: C/S341 or R340 & MATH-M19 or M211) OR 2
CHEM-C 317 Equilibria and Electrochem (P/C: C/S341 & MATH-M211 or M213) AND 2
CHEM-C 318 Spectroscopy and Separations (P/C: C/S341 and MATH-M211 or M213) 2
CHEM-A 315 Chemical Measurements Lab (P: C317 & C318 or A314) 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) AND 2
CHEM-P 464 Advanced Measurements-Physical Chem (P: C/S361 or C/S342) (P: C/S362) 2
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 & C340) 2
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 & C494) 3
CHEM-C 483 Biological Chem (P: C/S342 or R340) OR 3
CHEM-C 484 Biomolecules and Catabolism (P: C/S342) 3
CHEM-C 485 Biosynthetic Pathways & Control of Metabolism (P: C484) 3

IV. ELECTIVES (To total 120 credits)