B.S. EDUCATION: SCIENCE (EARTH/SPACE SCIENCE)

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

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 MATH-D 117 Intro to Finite Mathematics II (Note: D116 must have a grade of C- or higher & D117 must have a passing grade to fulfill the MM requirement) 2
- MATH-J 113 Intro to Calculus with Applications 3
- MATH-M 119 Brief Survey of Calculus I 3
- MATH-M 211 Calculus I 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) (Complete ONE of the following options.) 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.
- Complete an approved study (IF)

Option II: Complete a 5 credit science course.
- 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.

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

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

Option II: World Culture (WC): Complete at least 2 courses for a total of at least 6 credits.
- Complete an approved study abroad program or internship of at least 6 credits & at least 6 weeks abroad in duration.
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 required for completion of TEP prerequisites for authorized courses.
EDUC-M 300 Teaching in a Pluralistic Society (P: Soph. Standing) 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-Authorized Course 6 credits

EDUC-A 308 Legal & Ethical Issues for Teachers (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

Completion of TEP prerequisites for authorized courses is required. 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 Science 3
EDUC-M 403 Field Experience II 2
EDUC-S 303 Classroom Management/Sec. 1

Block III (Student Teaching) 13 credits
Students may not enroll in other classes while completing student teaching. (Exception: EDUC-M 202: Job Strategies)
EDUC-M 420 Student Teaching Seminar 1
EDUC-M 480 Student Teaching (EEE) 12

III. EARTH/SPACE SCIENCE CONTENT
50 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 or college chemistry) (N&M) 3
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 Lab & Honors 5

Geog-G 304 Physical Climatology (P: G 107 or G 109 or consent of instructor) 3
HPSC-X 102 Revol in Science: Plato-NATO (S&H, WC) OR 3
HPSC-X 222 Big Science in 20th Century (S&H) 5

PHYS-P 201 General Physics I (P: MATH-M 26) (N&M) OR 3

Earth/Space Science Major 31 credits

Complete 6 credits from the following:
AST-A 100 The Solar System (N&M) 3
AST-A 102 Gravity, the Great Attractor: Evolution of Planets, Stars & Galaxies (N&M) 3
AST-A 103 The Search for Life in the Universe (N&M) 3
AST-A 105 Stars & Galaxies (N&M) 3
AST-A 115 Birth & Death of the Universe (N&M) 3

Complete 3 credits from the following:
GEOL-G/S 103 Earth Science: Materials & Processes (N&M) 3
GEOL-G 104 Evolution of the Earth (N&M) 3
GEOL-G 105 Earth: Our Habitable Planet (N&M) 3
GEOL-G 111 Physical Geology (P: HS or College CHEM) (N&M) 3
GEOL-G 114 Dinosaurs & Their Relatives (N&M) 3
GEOL-G 116 Our Planet & Its Future (N&M) 3
GEOL-G/S 121 Meteorites & Planets (N&M) 3
GEOL-G 131 Oceans & Our Global Environment (N&M) 3
GEOL-G 141 Earthquakes & Volcanoes (N&M) 3
GEOL-G 171 Environmental Geology (N&M) 3

Complete the following:
GEOL-G 221 Intro to Mineralogy (P: College CHEM) (Fall only) 4
GEOL-G 222 Intro to Petrology (P: G 221) (Spring only) 4

Complete 3 credits from the following:
GEOL-G 300 Environmental & Urban Geology (P: 1 GEOL or physical GEOG course) (Spring only) 3
GEOL-G 302 Dev of the Global Environ (P: College AST, CHEM or PHYS & MATH-M 118 or higher) (Spring only) 3
GEOL-G 323 Structural Geol. (P: G 104, P/C: G 222) (Spring only) 4
GEOL-G 334 Principles of Sedimentology & Stratigraphy (P: G 222) (Fall only) 4

Complete 3 credits from the following:
GEOL-G 404 Geobiology (P: G 334 & BIOL-L 111 or L 112) (Fall of odd # years) 3
GEOL-G 411 Invert. Paleontology (P: Jr. Standing & Instructor permission) (Spring only) 3
GEOL-G 415 Geomorphology (P: G 222, College CHEM & MATH) (Fall only) 3
GEOL-G 418 Igneous & Metamorphic Petrology (P: G 222) (Fall only) 3
GEOL-G 424 Geological Information Systems (Fall & Spring) 3

Complete at least 8 additional credits of GEOL at the 300 or 400 level.

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IV. ELECTIVES (To total 120 credits)