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| **Catalog Year 2023-2024**B.S., Earth & Environmental SystemsGeospatial Systems Track | ***(For internal use only)***[ ]  *No change*[ ]  *UCC proposal* |

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| **Course Subject and Title** | **Cr.**  | **Min.** **Grade** | **\*GE,** **UU or UM** | **\*\*Sem. Offered** | **Prerequisite** | **Co Requisite** |
| Semester One |
| GE Objective 1: ENGL 1101 Writing and Rhetoric I | 3 | C- | GE | F, S, Su | Appropriate placement score |  |
| GE Objective 3: MATH 1160 Applied Calculus | 3 | C- | GE | F, S, Su | Appropriate Placement Score |  |
| OR MATH 1170 Calculus I | 4 | C- | GE | F, S, Su | Appropriate placement score |  |
| GE Objective 5: BIOL 1101 & BIOL 1101L General Biology I | 4 |  | GE | F, S, Su | MATH 1108/appropriate score | MATH 1108/score, BIOL 1101L |
| GE Objective 7/8: GEOL 1107 Real Monsters | 3 |  | GE | F, S |  |  |
|  Total | 13-14 |  |  |  |  |  |
| Semester Two |
| GE Objective 1: ENGL 1102 Writing and Rhetoric II | 3 | C- | GE | F, S, Su | ENGL 1101 or equivalent |  |
| GE Objective 5: CHEM 1111 and 1111L General Chemistry I | 5 |  | GE | F, S, Su | MATH 1143 or 1147  | CHEM 1111L |
| BIOL 1102 & BIOL 1102L General Biology II | 4 |  |  | F, S | BIOL 1101 | BIOL 1102L |
| GE Objective 4 | 3 |  | GE | F, S, Su |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Three |
| GE Objective 2: COMM 1101 Principles of Speech | 3 |  | GE | F, S, Su |  |  |
| GEOL 2204 Fluid Earth | 4 |  |  | F |  |  |
| GEOL 3392 Geosciences Career Seminar | 1 |  |  | F |  |  |
| GE Objective 6 | 3 |  | GE | F, S, Su |  |  |
| Free Elective | 3 |  |  | F, S, Su |  |  |
|  Total | 14 |  |  |  |  |  |
| Semester Four |  |  |  |  |  |  |
| GEOL 2205 Solid Earth | 4 |  |  | S |  |  |
| BIOL 2209 and BIOL 2209L General Ecology and Lab | 4 |  |  | F, S | BIOL 1101 and BIOL 1102 | BIOL 2209L |
| GEOL 4403 and GEOL 4403 Lab Principles of GIS | 3 |  | UM | F, S |  | GEOL 4403L |
| GE Objective 6 | 3 |  | GE | F, S, Su |  |  |
| Free Elective | 1-3 |  |  | F, S, Su |  |  |
|  Total | 15-17 |  |  |  |  |  |
| Semester Five |  |  |  |  |  |  |
| GEOL 4404 Advanced Geographic Information Systems | 3 |  | UM | F, S | GEOL 4403 and GEOL 4403L |  |
| Geology course from identified selection  | 3 |  | UM | F, S | See Undergraduate Catalog |  |
| Free Elective | 6 |  |  | F, S, Su |  |  |
| MATH 3350 Statistical Methods | 3 |  | UM | F, S | MATH 1160 of MATH 1170 |  |
|  Total | 15 |  |  |  |  |  |
| Semester Six |  |  |  |  |  |  |
| GEOL 3315 Evolution of Earth’s Surface | 4 |  | UM | S | GEOL 2205 |  |
| GEOL 4409 Remote Sensing | 3 |  | UM | D |  |  |
| GEOL 4427 Information Technology for GIS | 3 |  | UM | S | GEOL 4403 and GEOL 4403L |  |
| GE Objective 4 | 3 |  | GE | F, S, Su |  |  |
| Free Elective | 2 |  |  | F, S, Su |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Seven |  |  |  |  |  |  |
| GEOL 4407 GPS Applications in Research | 3 |  | UM | F | GEOL 4403 |  |
| Geology course from identified selection  | 3 |  | UM | F, S | See Undergraduate Catalog |  |
| Free Elective | 3 |  |  | F, S, Su |  |  |
| GEOL 4428 Programing for GIS | 3 |  | UM | F | GEOL 4403 and GEOL 4403L |  |
| GE Objective 9 | 3 |  | GE | F, S, Su |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Eight |  |  |  |  |  |  |
| GEOL 4408 GeoTechnology Seminar | 2 |  | UM | F, S | GEOL 4403 and GEOL 4403L |  |
| Upper Division Elective | 3 |  | UU | F, S, Su |  |  |
| Free Elective | 10 |  |  | F, S, Su |  |  |
|  Total | 15 |  |  |  |  |  |
| \*GE=General Education Objective, UU=Upper Division University, UM= Upper Division Major\*\*See Course Schedule section of Course Policies page in the e-catalog (or input F, S, Su, etc.)  |

A Major Academic Plan (MAP) is one way to complete a degree in a set number of semesters. The *example* below is an efficient strategy only. Actual plans for individual students will vary based on advisor recommendations and academic needs. Official Program Requirements including Major, General Education, Elective, and university requirements (see pg.2) are based on Catalog Year.

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|  BS, Earth & Environmental Systems, Geospatial Page 2  |
| **2023-2024 Major Requirements** | **CR** | **GENERAL EDUCATION OBJECTIVES****Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9** | **36 cr. min** |
| **MAJOR REQUIREMENTS** | **56** | 1. Written English (6 cr. min) ENGL 1101 | 3 |
| **Core Courses** | **24** |  ENGL 1102 | 3 |
| GEOL 2204 Fluid Earth | 4 | 2. Oral Communication (3 cr. min) COMM 1101 | 3 |
| GEOL 2205 Solid Earth | 4 | 3. Mathematics (3 cr. min) MATH 1160/1170 | 3-4 |
| GEOL 3392 Geosciences Career Seminar | 1 | 4. Humanities, Fine Arts, Foreign Lang. **(2 courses; 2 categories; 6 cr. min)** |
| GEOL 3315 Evolution of the Earth’s Surface | 4 |  |  |
| GEOL 4403 Principles of Geographic Information Systems | 3 |  |  |
| BIOL 1101 & BIOL 1101L Biology I and Lab (included in General Ed) | 5. Natural Sciences **(2 lectures-different course prefixes, 1 lab; 7 cr. min)** |
| BIOL 1102 and BIOL 1102L Biology II and Lab | 4 | BIOL 1101 & BIOL 1101L Biology I & Lab | 4 |
| BIOL 2209 and BIOL 2209L General Ecology and Lab | 4 | CHEM 1111 & 1111L General Chemistry I and Lab  | 5 |
| CHEM 1111 & 1111L General Chemistry I and Lab (included in General Ed) |  |  |
|  |  | 6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)** |
| **Environmental Systems Track** | **26** |  |  |
| GEOL 4404 Advanced Geographic Information Systems  | 3 |  |  |
| GEOL 4407 GPS/GNSS Applications in Research  | 3 | One Course from EITHER Objective 7 OR 8 **(1course; 3 cr. min)** |
| GEOL 4408 GeoTechnology Seminar | 2 | 7. Critical Thinking | GEOL 1107 Real Monsters | 3 |
| GEOL 4409 Remote Sensing  | 3 | 8. Information Literacy  |
| GEOL 4427 Information Technology for GIS | 3 | 9. Cultural Diversity **(1 course; 3 cr. min)** |
| GEOL 4428 Programming for GIS | 3 |  |  |
| MATH 3350 Statistical Methods | 3 | General Education Elective to reach 36 cr. min. **(if necessary)** |
| MATH 1160 Survey of Calculus or MATH 1170 Calculus I (included in Gen. Ed.) |   |  |
|  |  |  |  |
| **Select TWO courses** | **6** |  Total GE | 39-40 |
| GEOL 3310 Geologic Field Methods | 3 | Undergraduate Catalog and GE Objectives by [Catalog Year](https://coursecat.isu.edu/undergraduate/programs/)  *https://coursecat.isu.edu/undergraduate/programs/* |
| GEOL 4410 Science in American Society | 2 |
| GEOL/HIST 4471 Historical Geography of Idaho | 3 |  |  |
| GEOL 4480 Special Topics in GIS | 1-3 | **MAP Credit Summary** | **CR** |
| GEOL 4481 GeoTechnology Internship | 1-3 | Major  | 56 |
| GEOL 4482 Independent Problems and Studies in Geology | 1-3 | General Education  | 39-40 |
| HIST 4430 Global Environmental History | 3 | Upper Division Free Electives to reach 36 credits | 3 |
| HIST 4432 U.S. Environmental History | 3 | Free Electives to reach 120 credits | 21-22 |
| POLS 4455 Environmental Politics and Policies | 3 |  TOTAL | 120 |
| PHIL 4455 Environmental Ethics | 3 |  |
| SOC 4435 Environmental Sociology | 3 | **Graduation Requirement Minimum Credit Checklist** | **Confirmed** |
| **Or other approved courses in related fields** |  | Minimum 36 cr. General Education Objectives (15 cr. AAS) | x |
|  |  | Minimum 15 cr. Upper Division in Major (0 cr. Associate) | x |
|  |  | Minimum 36 cr. Upper Division Overall (0 cr. Associate) |  | x |
|  |  | Minimum of 120 cr. Total (60 cr. Associate) |  | x |
|  |  |  |
|  |  | ***MAP Completion Status (for internal use only)*** |
|  |  |  | *Date* |
|  |  |  |  |
| **Advising Notes** | *OAA or COT:* |  |
| **Additional Recommended courses:** |  |  |
| ENGL 3307 Professional and Technical Writing | **Complete College American Momentum Year****Math and English course in first year-Specific GE MATH course identified****9 credits in the Major area in first year****15 credits each semester (or 30 in academic year)****Milestone courses** |
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 Form Revised 9.10.2019