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| **Catalog Year 2021-2022**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 1147 Pre-calc (or MATH 1143 and 1144) | 5 | C- | GE | F, S, Su | Appropriate Placement Score |  |
| GE Objective 5: BIOL 1101 & BIOL 11101 L 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 | 15 |  |  |  |  |  |
| 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 2292 Geosciences Career Seminar | 1 |  |  | F |  |  |
| GE Objective 6 | 3 |  | GE | F, S, Su |  |  |
| MATH 1160 Survey of Calculus or MATH 1170 Calculus | 3-4 |  |  | F, S, Su | MATH 1143 and 1144 or 1147 |  |
| Free Elective | 0-1 |  |  | F, S, Su |  |  |
|  Total | 15 |  |  |  |  |  |
| 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 |  |  | F, S, Su |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Five |  |  |  |  |  |  |
| GEOL 4404 Advanced Geographic Information Systems | 3 |  | UM | F, S | GEOL 4403 and GEOL 4403L |  |
| Geology course from identified selection  | 1-3 |  | UM | F, S | See Undergraduate Catalog |  |
| Free Elective | 6-8 |  |  | 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  | 1-3 |  | UM | F, S | See Undergraduate Catalog |  |
| Free Elective | 3-4 |  |  | 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 | 3-7 |  | UU | F, S, Su |  |  |
| Free Elective | 6-10 |  |  | 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  |
| **2021-2022 Major Requirements** | **CR** | **GENERAL EDUCATION OBJECTIVES****Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9** | **36 cr. min** |
| **MAJOR REQUIREMENTS** | **49-54** | 1. Written English (6 cr. min) ENGL 1101 | 3 |
| **Core Courses** | **25** |  ENGL 1102 | 3 |
| GEOL 1107 Real Monsters (included in General Education) | 2. Oral Communication (3 cr. min) COMM 1101 | 3 |
| GEOL 2204 Fluid Earth | 4 | 3. Mathematics (3 cr. min) MATH 1147 | 5 |
| GEOL 2205 Solid Earth | 4 | 4. Humanities, Fine Arts, Foreign Lang. **(2 courses; 2 categories; 6 cr. min)** |
| GEOL 2292 Geosciences Career Seminar | 1 |  |  |
| GEOL 3315 Evolution of the Earth’s Surface | 4 |  |  |
| GEOL 4403 Principles of Geographic Information Systems | 3 | 5. Natural Sciences **(2 lectures-different course prefixes, 1 lab; 7 cr. min)** |
| BIOL 1101 & BIOL 1101L General Biology I and Lab (included in General Ed) | BIOL 1101 and BIOL 1101 Lab | 4 |
| BIOL 1102 and BIOL 1102L General Biology II and Lab | 4 | CHEM 1111 & 1111L General Chemistry I and Lab  | 5 |
| BIOL 2209 and BIOL 2209L General Ecology and Lab | 4 |  |  |
| CHEM 1111 & 1111L General Chemistry I and Lab (included in General Ed) | 6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)** |
| MATH 1147 College Algebra and Trigonometry (included in General Ed) |  |  |
|  Or MATH 1143 & MATH 1144  |  |  |
| **Environmental Systems Track** | **23-24** | One Course from EITHER Objective 7 OR 8 **(1course; 3 cr. min)** |
| GEOL 4404 Advanced Geographic Information Systems  | 3 | 7. Critical Thinking | GEOL 1107 Real Monsters | 3 |
| GEOL 4407 GPS Applications in Research  | 3 | 8. Information Literacy  |
| GEOL 4408 GeoTechnology Seminar | 2 | 9. Cultural Diversity **(1 course; 3 cr. min)** |
| GEOL 4409 Remote Sensing  | 3 |  |  |
| GEOL 4427 Information Technology for GIS | 3 | General Education Elective to reach 36 cr. min. **(if necessary)** |
| GEOL 4428 Programming for GIS | 3 |   |  |
| MATH 3350 Statistical Methods | 3 |  |  |
| MATH 1160 Survey of Calculus or MATH 1170 Calculus I  | 3-4 |  Total GE | 41 |
| **Select TWO courses** | **2-6** | Undergraduate Catalog and GE Objectives by [Catalog Year](https://www.isu.edu/advising/academic-support/general-education/)  *http://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  | 49-54 |
| GEOL 4482 Independent Problems and Studies in Geology | 1-3 | General Education  | 41 |
| GLBL 3379 Environment and Geography | 3 | Upper Division Free Electives to reach 36 credits | 3-7 |
| GLBL 4466 Cultural Geography | 3 | Free Electives to reach 120 credits | 21-22 |
| GLBL 4480 International Parks and Protected Areas | 3 |  TOTAL | 120 |
| HIST 4430 Global Environmental History | 3 |  |
| HIST 4432 U.S. Environmental History | 3 | **Graduation Requirement Minimum Credit Checklist** | **Confirmed** |
| POLS 4455 Environmental Politics and Policies | 3 | Minimum 36 cr. General Education Objectives (15 cr. AAS) | x |
| PHIL 4455 Environmental Ethics | 3 | Minimum 15 cr. Upper Division in Major (0 cr. Associate) | x |
| SOC 3335 Environmental Sociology | 3 | Minimum 36 cr. Upper Division Overall (0 cr. Associate) |  | x |
| SOC 3335 Environmental Sociology | 3 | Minimum of 120 cr. Total (60 cr. Associate) |  | x |
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|  |  | ***MAP Completion Status (for internal use only)*** |
|  |  |  | *Date* |
|  |  |  |  |
| **Advising Notes** | *CAA 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** |
| PHYS 1111/ 1113 Gen Physics/ Lab or PHYS 2211/2213 Engin Phys/Lab |
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 Form Revised 9.10.2019