

**Catalog Year 2018-2019**

B.S., Earth & Environmental System

Geospatial Systems Track

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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| **Course Subject and Title** | **Cr.** | **Min.**  **Grade** | **\*GE,**  **UU or UM** | **\*\*Sem. Offered** | **Prerequisite** | **Co Requisite** | | | |
| Semester One | | | | | | | | | |
| GE Objective 1: ENGL 1101 English Composition | 3 | C- | GE | F, S, Su | Appropriate placement score |  | | | |
| GE Objective 5: GEOL 1100 Dynamic Earth (lecture only) **OR**  GEOL 1101 Physical Geology (lecture only) | 3 | C- | GE | F, S, Su |  |  | | | |
| GEOL 1110 Physical Geol for Scientists Lab | 1 |  | GE | F, S | GEOL 1100 or GEOL 1101 |  | | | |
| GE Objective 3: Either MATH 1170 or MATH 1160 | 4 or 3 | C- | GE | F, S, Su | MATH 1147 or equivalent (or MATH 1143) | | |  | |
| BIOL 1101 and BIOL 11101 L General Biology I | 4 |  |  | F, S, Su | MATH 1108 or equivalent | MATH 1108 | | | |
| Free Electives | 0 or 1 |  |  |  |  |  | | | |
| Total | 15 |  |  |  |  |  | | | |
| Semester Two | | | | | | | | | |
| GE Objective 1: ENGL 1102 Critical Reading and Writing | 3 | C- | GE | F, S, Su | ENGL 1101 or equivalent |  | | | |
| BIOL 1102 Biology and BIOL 1102L II | 4 |  |  | F, S | BIOL 1101 |  | | | |
| GE Objective 5: CHEM 1111 and 1111L General Chemistry I | 5 |  | GE | F, S, Su | MATH 1143 equivalent |  | | | |
| GE Objective 4 | 3 |  | GE | F, S, Su |  |  | | | |
| Total | 15 |  |  |  |  |  | | | |
| Semester Three | | | | | | | | | |
| GE Objective 2:Principles of Speech | 3 |  | GE | F, S, Su |  |  | | | |
| GEOL 3306 Environmental Geology | 3 |  | UM | F | GEOL 1100 or GEOL 1101 |  | | | |
| GEOL 4403 Principles of GIS & GEOL 4403 L | 3 |  | UM | F,S |  |  | | | |
| BIOL 2209 & BIOL 2209 L General Ecology & Lab | 4 |  |  | F,S | BIOL 1101 and BIOL 1102 |  | | | |
| GE Objective 6 | 3 |  |  | F,S, Su |  |  | | | |
| Total | 16 |  |  |  |  |  | | | |
| Semester Four |  |  |  |  |  |  | | | |
| GEOL 4404 Advanced Geographic Information Systems | 3 |  | UM | S | GEOL 4403 & GEOL 4403 L or permission of instructor | | | |  |
| GEOL 4408 Geo Technology Seminar | 2 |  | UM | F,S | GEOL 4403 & GEOL 4403 L or permission of Instructor | | | |  |
| GEOL 3315 Evolution of Earth’s Surface | 4 |  | GE | S | GEOL 1100 or GEOL 1110, GEOL 1110 | | | |  |
| GE Objective 7 or 8 | 3 |  | GE | F,S, Su |  |  | | | |
| Free Electives | 3 |  |  | F,S, Su |  |  | | | |
| Total | 15 |  |  |  |  |  | | | |
| Semester Five |  |  |  |  |  |  | | | |
| GEOL 4407 GPS Applications in Research | 3 |  | UM | F | GEOL 4403 |  | | | |
| MATH 3350 Statistical Methods | 3 |  | UM | F,S | MATH 1160 or MATH 1170 |  | | | |
| GE Objective 6 | 3 |  | GE | F,S, Su |  | |  | | |
| GE Objective 4 | 3 |  | GE | F,S, Su |  |  | | | |
| Free Electives | 3 |  |  | F,S, Su |  |  | | | |
| Total | 15 |  |  |  |  |  | | | |
| Semester Six |  |  |  |  |  |  | | | |
| GEOL 4416 Global Environmental Change | 3 |  | UM | AS | BIOL 2209 & GEOL 3306 |  | | | |
| GEOL 4409 Remote Sensing | 3 |  | UM | S | Requires knowledge in computer operating systems | | | |  |
| SET A GEOL Electives | 1 - 3 |  | UM | F,S,D | See Catalog |  | | | |
| GEOL 4427 Information Technology for GIS | 3 |  | UM | S | GEOL 4403 & GEOL 4403 L or permission of instructor | | | |  |
| Free Electives | 3 - 5 |  |  |  |  |  | | | |
| Total | 15 |  |  |  |  |  | | | |
| Semester Seven |  |  |  |  |  |  | | | |
| GEOL 4428 Programming for GIS | 3 |  | UM | F | GEOL 4403 & GEOL 4403 L |  | | | |
| SET B GEOL Electives | 2 or 3 |  | UM | AF,R2,D | See Catalog |  | | | |
| GE Objective 9 | 3 |  | GE | F,S, Su |  |  | | | |
| Free Electives | 6 or 7 |  |  | F,S, Su |  |  | | | |
| Total | 15 |  |  |  |  |  | | | |
| Semester Eight |  |  |  |  |  |  | | | |
| GEOL 4492 Earth and Environmental Systems Seminar | 1 |  | UM | S | Junior or senior standing |  | | | |
| SET C GEOL Electives | 2 - 4 |  | UM | See catalog | See Catalog |  | | | |
| Free Electives | 9 - 11 |  |  | F,S, Su |  |  | | | |
| Total | 14 |  |  |  |  |  | | | |
| \*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.) | | | | | | | | | |

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| **2018-2019 Major Requirements** | **CR** | **GENERAL EDUCATION OBJECTIVES**  **Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9** | | | | **36 cr. min** | |
| **MAJOR REQUIREMENTS** | **52 - 57** | 1. Written English (6 cr. min) ENGL 1101 | | | | 3 | |
| **Core Requirements** | **27** | ENGL 1102 | | | | 3 | |
| Either GEOL 1100 (no lab) OR GEOL 1101 (no lab) (3 cr counted in Obj. 5) | | 2. Spoken English (3 cr. min) COMM 1101 | | | | 3 | |
| GEOL 1110 Physical Geology for Scientists Lab | 1 | 3. Mathematics (3 cr. min) MATH 1160 or MATH 1170 | | | | 3 or 4 | |
| GEOL 3306 Environmental Geology | 3 | 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 GIS | 3 |  | | | |  | |
| GEOL 4416 Global Environmental Change | 3 | 5. Natural Sciences **(2 lectures-different course prefixes, 1 lab; 7 cr. min)** | | | | | |
| GEOL 4492 Earth and Environmental Systems Seminar | 1 | GEOL 1100 or GEOL 1101 | | | | 3 | |
| BIOL 1101 and 1101L Biology I and Lab | 4 | CHEM 1111 & CHEM 1111L | | | | 5 | |
| BIOL 1102 and 1102L Biology II and Lab | 4 |  | | | |  | |
| BIOL 2209 and 2209L General Ecology and Lab | 4 | 6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)** | | | | | |
| CHEM 1111 and 1111L General Chemistry (5 cr counted in Objective 5) | |  | | | |  | |
| Math 1160 Applied Calculus or 1170 Calculus I (3-4 cr counted in Objective 3) | |  | | | |  | |
| **BS Geospatial Systems Track** | **25- 30** | One Course from EITHER Objective 7 OR 8 **(1course; 3 cr. min)** | | | | | |
| **Required Courses** | **20** | 7. Critical Thinking | | | |  | |
| GEOL 4404 Advanced Geographic Information Systems | 3 | 8. Information Literacy | | | |
| GEOL 4407 GPS Applications in Research | 3 | 9. Cultural Diversity **(1 course; 3 cr. min)** | | | | | |
| GEOL 4408 GeoTechnology Seminar | 2 |  | | | |  | |
| GEOL 4409 Remote Sensing | 3 | General Education Elective to reach 36 cr. min. **(if necessary)** | | | | | |
| GEOL 4427 Information Technology for GIS | 3 |  | | | |  | |
| GEOL 4428 Programming for GIS | 3 | **Total GE** | | | | **38 or 39** | |
| MATH 3350 Statistical Methods | 3 | Undergraduate Catalog and GE Objectives by [Catalog Year](https://www.isu.edu/advising/academic-support/general-education/) | | | | | |
| **SET A - select ONE course** | **1 - 3** |
| GEOL 4480 Special Topics in GIS  GEOL 4481 GeoTechnology Internship  GEOL 4482 Independent Problems and Studies in Geology | 1-3  1-3  1-3 |  | | | | | |
| **Set B - select ONE course** | **2 - 3** |
| GEOL 4410 Science in American Society | 2 |
| HIST 4430 Global Environmental History | 3 | **MAP Credit Summary** | | | | **CR** | |
| POLS 4455 Environmental Politics and Policies | 3 | Major | | | | 52 - 57 | |
| **Set C - select ONE course, not used to satisfy other requirements** | **2 - 4** | General Education | | | | 38 or 39 | |
| GEOL 4410 Science in American Society | 2 | Free Electives to reach 120 credits | | | | 24 - 30 | |
| GEOL/HIST 4471 Historical Geography of Idaho | 3 | TOTAL | | | | 120 | |
| GEOL 4430 Global Environmental. History | 3 | **Graduation Requirement Minimum Credit Checklist** | | | **Confirmed** | | |
| HIST 4432 U.S. Environmental History | 3 | Minimum 36 cr. General Education Objectives (15 cr. AAS) | | | Yes | | |
| HIST 4489 GIS for Social Science | 3 | Minimum 16 cr. Upper Division in Major (0 cr. Associate) | | |  | | Yes |
| HIST 4490 /4490L Cartography | 4 | Minimum 36 cr. Upper Division Overall (0 cr. Associate) | | |  | | Yes |
| POLS 4455 Environmental Politics and Policy | 3 | Minimum of 120 cr. Total (60 cr. Associate) | | |  | | Yes |
| POLS 4466 Public Lands Policy | 3 |  | |  | | | |
| ANTH 4402 Ecological Anthropology | 3 |  | |  | | | |
| ECON 3352 Environmental Economics | 3 |  | |  | | | |
| PHIL 4455 Environmental Ethics | 3 |  | |  | | | |
| SOC 3335 Population and Environment | 3 |  | |  | | | |
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| **Advising Notes** | | ***MAP Completion Status (for internal use only)*** | | | | | |
| Check prerequisites and term offered early on for Set C. | |  | *Date* | | | | |
| English 3307 Professional & Technical Writing, 3 cr, recommended. | | *Department:* |  | | | | |
|  | | *CAA or COT:* | 4.2.2018 SF jh | | | | |
|  | | *Registrar:* |  | | | | |
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Form Revised 1.24.2018