Earth Science Education, B.S.

Requirements

Earth Science is the study of the Earth, including its water and atmosphere, and their relationship to humans and other living things. Earth Science applies chemistry, physics, mathematics and biology to scientific problems of the Earth. The Earth Science Education program prepares students to receive a Utah State teaching credential with an endorsement in Earth Science. Through careful choice of courses, students may also earn endorsements in the other physical sciences.

Total Program Credits: 123

Matriculation Requirements:

1. Complete the following courses: GEO 1010, GEO 1015, MATH 1050 or MATH 1055, MATH 1060, BIOL 1610 with a grade of "C" or higher in each.
2. Complete a minimum of 30 semester hours of college credit.
3. Apply to the department of Earth Science for admission.

Secondary Education Requirements:

1. ACT exam minimums: Composite 21, English 20, Math 19; or SAT exam minimums: Critical Read/Math 1000, with Math and Reading scores of 450; or If student has a bachelor degree or higher, he/she does not need to meet this testing requirement.
2. GPA of 3.0 or higher with no grade lower than a C in content area courses.
3. Completion of all General Education requirements and the majority of content area courses.
4. Pass group interview directed by the Secondary Teacher Education Department.
5. Pass LiveScan Criminal Background Check.

General Education Requirements: 27 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1010</td>
<td>Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 2010</td>
<td>Intermediate Writing--Humanities/Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 2020</td>
<td>Intermediate Writing--Science and Technology (3.0)</td>
<td></td>
</tr>
<tr>
<td>MATH 1050</td>
<td>College Algebra</td>
<td>4</td>
</tr>
<tr>
<td>or MATH 1055</td>
<td>College Algebra with Preliminaries (5.0)</td>
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Complete one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 2700</td>
<td>US History to 1877 (3.0)</td>
<td></td>
</tr>
<tr>
<td>and HIST 2710</td>
<td>US History since 1877 (3.0)</td>
<td></td>
</tr>
<tr>
<td>HIST 1700</td>
<td>American Civilization (3.0)</td>
<td></td>
</tr>
<tr>
<td>HIST 1740</td>
<td>US Economic History (3.0)</td>
<td></td>
</tr>
<tr>
<td>POLS 1000</td>
<td>American Heritage (3.0)</td>
<td></td>
</tr>
<tr>
<td>POLS 1100</td>
<td>American National Government (3.0)</td>
<td></td>
</tr>
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Complete the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHIL 2050</td>
<td>Ethics and Values</td>
<td>3</td>
</tr>
<tr>
<td>HLTH 1100</td>
<td>Personal Health and Wellness (2.0)</td>
<td></td>
</tr>
<tr>
<td>or PES 1097</td>
<td>Fitness for Life</td>
<td>2</td>
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</table>

Distribution Courses

- Biology*
- Physical Science*
- Additional Biology or Physical Science*
- Humanities Distribution
- Fine Arts Distribution
- Social/Behavioral Science

Discipline Core Requirements: 93 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ASTR 1040</td>
<td>Elementary Astronomy</td>
<td>3</td>
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Elective Requirements: 3 Credits

Any 3 credit hours from the following list

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO 1080</td>
<td>Introduction to Oceanography (3.0)</td>
<td></td>
</tr>
<tr>
<td>GEO 1085</td>
<td>Introduction to Oceanography Laboratory (1.0)</td>
<td></td>
</tr>
<tr>
<td>GEO 202R</td>
<td>Science Excursion (1.0)</td>
<td></td>
</tr>
<tr>
<td>GEO 204R</td>
<td>Natural History Excursion (3.0)</td>
<td></td>
</tr>
<tr>
<td>GEO 3000</td>
<td>Environmental Geochemistry (3.0)</td>
<td></td>
</tr>
<tr>
<td>GEO 3100</td>
<td>Isotope Geochemistry (3.0)</td>
<td></td>
</tr>
<tr>
<td>GEO 3200</td>
<td>Geologic Hazards (4.0)</td>
<td></td>
</tr>
<tr>
<td>GEO 3500</td>
<td>Geomorphology (4.0)</td>
<td></td>
</tr>
<tr>
<td>GEO 4510</td>
<td>Paleontology (4.0)</td>
<td></td>
</tr>
<tr>
<td>METO 1020</td>
<td>Introduction to Meteorology Laboratory (1.0)</td>
<td></td>
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</table>
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| Or other advisor-approved electives |

**Graduation Requirements:**

1. Completion of a minimum of 123 semester credits.
2. Overall GPA of 3.0 (B) or above with no grade lower than a C in major required content courses and no grade lower than a B- in Licensure and Methods courses. (Departments may require a higher GPA.)
3. Residency hours -- minimum of 20 credit hours through course attendance at UVU.
4. Completion of GE and specified departmental requirements.
5. Grade of C or higher in all GEO, BIOL, and METO courses.
6. Successful completion of at least one Global/Intercultural course.

Note: *This requirement is fulfilled with the core requirements.*
Earth Science Education, B.S.
Graduation Plan
This graduation plan is a sample plan and is intended to be a guide. Your specific plan may differ based on your Math and English placement and/or transfer credits applied. You are encouraged to meet with an advisor and set up an individualized graduation plan in Wolverine Track.

Milestone courses (pre-requisites for a course in one of the subsequent semesters) are marked in red and italicized.

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course Title</th>
<th>Credit</th>
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<tbody>
<tr>
<td>ENGL 1010</td>
<td>Introduction to Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1050 or MATH 1055</td>
<td>College Algebra or College Algebra with Preliminaries</td>
<td>4</td>
</tr>
<tr>
<td>GEO 1010</td>
<td>Introduction to Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEO 1015</td>
<td>Introduction to Geology Lab</td>
<td>1</td>
</tr>
<tr>
<td>American Institutions</td>
<td>See General Education List</td>
<td>3</td>
</tr>
<tr>
<td>HLTH 1100 or PES 1097</td>
<td>Personal Health and Wellness or Fitness for Life</td>
<td>2</td>
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<thead>
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<th>Semester 2</th>
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<tr>
<td>ENGL 2020</td>
<td>Intermediate Writing--Science and Technology</td>
<td>3</td>
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<tr>
<td>MATH 1060</td>
<td>Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>GEO 1220</td>
<td>Historical Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEO 1225</td>
<td>Historical Geology Lab</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1010</td>
<td>General Biology</td>
<td>3</td>
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<tr>
<td>Humanities Distribution</td>
<td>See General Education List</td>
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<th>Course Title</th>
<th>Credit</th>
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<tbody>
<tr>
<td>CHEM 1210</td>
<td>Principles of Chemistry I</td>
<td>4</td>
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<tr>
<td>CHEM 1215</td>
<td>Principles of Chemistry I Lab</td>
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<tr>
<td>PHYS 2010</td>
<td>College Physics I</td>
<td>4</td>
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<tr>
<td>PHYS 2015</td>
<td>College Physics I Lab</td>
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</tr>
<tr>
<td>METO 1010</td>
<td>Intro to Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts Distribution</td>
<td>See General Education List</td>
<td>3</td>
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<tr>
<th>Semester 4</th>
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<tbody>
<tr>
<td>GEO 3700</td>
<td>Structure and Tectonics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2020</td>
<td>College Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2025</td>
<td>College Physics II Lab</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1220</td>
<td>Principles of Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1225</td>
<td>Principles of Chemistry II Lab</td>
<td>1</td>
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<thead>
<tr>
<th>Semester 5</th>
<th>Course Title</th>
<th>Credit</th>
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<tbody>
<tr>
<td>GEO 3080 and GEO 3085</td>
<td>Earth Materials and Earth Materials Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>ASTR 1040</td>
<td>Elementary Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>Geology Elective</td>
<td>Choose from: GEO 1080, GEO 1085, GEO 202R, GEO 204R, GEO 3000, GEO 3100, GEO 3200, GEO 3500, GEO 4510, METO 1020 or other advisor-approved electives</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2050 or PHIL 205G</td>
<td>Ethics and Values</td>
<td>3</td>
</tr>
<tr>
<td>Social/Behav Science Distribution</td>
<td>See General Education List</td>
<td>3</td>
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Note: *Co-requisites are required to be taken. Please see the advisor.

<table>
<thead>
<tr>
<th>Semester 6</th>
<th>Course Title</th>
<th>Credit</th>
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<tbody>
<tr>
<td>BIOL 2500 or GEO 3700</td>
<td>Environmental Biology or Wetland Studies</td>
<td>3</td>
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<tr>
<td>GEO 4500</td>
<td>Sedimentary Geology</td>
<td>4</td>
</tr>
<tr>
<td>METO 3100</td>
<td>Climate and Earth Systems</td>
<td>3</td>
</tr>
<tr>
<td>EDSP 3400</td>
<td>Exceptional Students</td>
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<tr>
<td>EDSC 3000</td>
<td>Educational Psychology</td>
<td>3</td>
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<td>EDSC 3050</td>
<td>Foundations of American Education</td>
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<tbody>
<tr>
<td>GEO 4200</td>
<td>Teaching Methods in Science</td>
<td>3</td>
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<tr>
<td>EDSC 3250</td>
<td>Instructional Media</td>
<td>2</td>
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<tr>
<td>EDSC 4440</td>
<td>Content Area Literacies</td>
<td>3</td>
</tr>
<tr>
<td>EDSC 445G</td>
<td>Multicultural Education ESL</td>
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</tr>
<tr>
<td>EDSC 4550</td>
<td>Secondary Curriculum Instruction and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EDSC 4200</td>
<td>Classroom Management I</td>
<td>2</td>
</tr>
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<td>Semester total:</td>
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<thead>
<tr>
<th>Semester 8</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EDSC 4250</td>
<td>Classroom Management II</td>
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<td>EDSC 4850</td>
<td>Student Teaching -- Secondary</td>
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<td>Degree total:</td>
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</table>

Utah Valley University

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