

SECONDARY SCIENCE ENDORSEMENT

Checklist of Minimum Requirements

COMPLETING THE FORM

Using an original copy of your transcripts, please highlight the corresponding courses and place the course number and institution abbreviation, (if more than one), into each requirement box provided.

For example:

| |
|----------|
| U of U |
| CHEM 101 |

When there is one box, it signifies that one course is required.

When there are two boxes, it signifies that two separate courses are required.

When there are three boxes, it signifies **one year** of **sequential** coursework.

- ▶ All 3 boxes need to be filled for courses taken at institutions on quarter systems or for USOE endorsement courses (e.g., Chem. 110, 111, 112 or Physics 1, Physics 2, Physics 3)
 - ▶ Only 2 boxes need to be filled for courses taken at institutions on semester systems.
 - ▶ PRAXIS exams--Utah Passing Score (UPS)
PRAXIS score must be at or above UPS to qualify.
 - ▶ PRAXIS exams--Interim Score (IS)
PRAXIS UPS has not yet been determined. PRAXIS score must be at or above national median.
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The following outlines the minimum requirements for each endorsement:

BIOLOGICAL SCIENCE

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|---------|--------------------------|---|
| UPS:149 | <input type="checkbox"/> | PRAXIS Exam [Biology: Content Knowledge (0235)] |
| | <input type="checkbox"/> | General Biology OR General Zoology AND General Botany |
| | <input type="checkbox"/> | Zoology (e.g., Invertebrate, Vertebrate, Entomology) |
| | <input type="checkbox"/> | Botany (e.g., Plant Kingdom, Plant Taxonomy, Plant Physiology) |
| | <input type="checkbox"/> | Zoology or Botany |
| | <input type="checkbox"/> | Cell Biology or Microbiology |
| | <input type="checkbox"/> | Human Anatomy and Physiology |
| | <input type="checkbox"/> | Heredity/Genetics |
| | <input type="checkbox"/> | Ecology (e.g., Field Ecology, Environmental Studies) |
| | <input type="checkbox"/> | Chemistry |
| | <input type="checkbox"/> | Teaching Methods in Science |
| | <input type="checkbox"/> | Evolution |
| | <input type="checkbox"/> | Safety Certification |

PHYSICAL SCIENCE

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|--------------------------|--------------------------|--------------------------|---|
| | IS: 164 | <input type="checkbox"/> | PRAXIS Exam [Physical Science: Content Knowledge (0481)] |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Principles of Chemistry |
| | | <input type="checkbox"/> | Advanced or Applied Chemistry (e.g., Organic, Physical Chemistry, Biochemistry, etc.) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | General Physics (including Mechanics, Electricity, Magnetism, Heat, Sound, and Light) |
| | | <input type="checkbox"/> | Advanced or Applied Physics (Modern Physics, Upper division physics) |
| | <input type="checkbox"/> | <input type="checkbox"/> | Geology/Earth Science (e.g., Ecology, Weather/Meteorology, Astronomy, Earth Systems, Historical, Structural, or Physical Geology) |
| | | <input type="checkbox"/> | Teaching Methods In Science |
| | | <input type="checkbox"/> | Safety Certification |

EARTH SCIENCE

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|--------------------------|--------------------------|--------------------------|---|
| | UPS: 153 | <input type="checkbox"/> | PRAXIS Exam [Earth and Space Sciences: Content Knowledge (0571)] |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Geology (e.g., Physical Geology, Surficial Geology/Geomorphology, Historical Geology, Rocks & Minerals/Mineralogy, Plate Tectonics) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | General Physics (including Mechanics, Electricity, Magnetism, Heat Sound, and Light) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Principles of Chemistry |
| | | <input type="checkbox"/> | Astronomy |
| | | <input type="checkbox"/> | Ecology (e.g., Ecology, Conservation, Environmental Studies) |
| | | <input type="checkbox"/> | Weather/Meteorology |
| | | <input type="checkbox"/> | Teaching Methods in Science |
| | | <input type="checkbox"/> | Safety Certification |

INTEGRATED SCIENCE

- Has a science endorsement for Biological Science, or Earth Science, or Physical Science plus the following course work that may have been part of an existing endorsement

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|--------------------------|---------|--------------------------|--|
| | IS: 167 | <input type="checkbox"/> | PRAXIS Exam [General Science: Content Knowledge (0435)] |
| | | <input type="checkbox"/> | General Biology <u>OR</u> General Botany <u>AND</u> General Zoology |
| | | <input type="checkbox"/> | Ecology (e.g., Ecology, Environmental Studies) |
| | | <input type="checkbox"/> | Heredity/Genetics |
| <input type="checkbox"/> | | <input type="checkbox"/> | Chemistry |
| | | <input type="checkbox"/> | General Physics |
| | | <input type="checkbox"/> | Astronomy |
| | | <input type="checkbox"/> | Earth Systems Science (e.g., Oceanography, "Earth Systems," Climatology) |
| | | <input type="checkbox"/> | Geology (e.g., Historical, Structural, Physical Geology, Rocks & Minerals) |

ENVIRONMENTAL SCIENCE

| | | |
|--------------------------|--------------------------|--|
| IS: 155 | <input type="checkbox"/> | PRAXIS Exam [Life Science: Pedagogy (0234)] |
| | <input type="checkbox"/> | General Biology <u>OR</u> General Zoology <u>AND</u> General Botany |
| | <input type="checkbox"/> | Zoology (e.g., Invertebrate, Vertebrate, Entomology) |
| | <input type="checkbox"/> | Botany (e.g., Plant Kingdom, Plant Taxonomy, Plant Physiology) |
| <input type="checkbox"/> | <input type="checkbox"/> | Ecology (e.g., Ecology, Environmental Chemistry, Environmental Studies) |
| <input type="checkbox"/> | <input type="checkbox"/> | Principles of Inorganic Chemistry |
| | <input type="checkbox"/> | Evolutionary Biology |
| | <input type="checkbox"/> | Earth Systems Science (e.g., Oceanography, "Earth Systems," Climatology) |
| | <input type="checkbox"/> | Geology (e.g., Historical, Structural, Physical Geology, Rocks & Minerals) |
| | <input type="checkbox"/> | Statistics |
| | <input type="checkbox"/> | Teaching Methods in Science |
| | <input type="checkbox"/> | Safety Certification |

CHEMISTRY

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|--------------------------|--------------------------|---|--|
| UPS: 151 | <input type="checkbox"/> | PRAXIS Exam [Chemistry: Content Knowledge (0245)] | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Principles of Chemistry |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Organic Chemistry |
| | | | One other course beyond Principles and Organic Chemistry (Biochemistry, Physical Chemistry, Advanced Inorganic, Quantitative Analysis) |
| | | <input type="checkbox"/> | Physical Chemistry, Advanced Inorganic, Quantitative Analysis) |
| | | <input type="checkbox"/> | Teaching Methods in Science |
| | | <input type="checkbox"/> | Safety Certification |

PHYSICS

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|--------------------------|--------------------------|---|---|
| UPS: 136 | <input type="checkbox"/> | PRAXIS Exam [Physics: Content Knowledge (0265)] | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | General Physics (including Mechanics, Electricity, Magnetism, Heat, Sound, and Light) |
| | <input type="checkbox"/> | <input type="checkbox"/> | Modern Physics (e.g., Atomic and Molecular Theory, Quantum Mechanics, Solid State) |
| | | <input type="checkbox"/> | Math through Introductory Calculus |
| | | <input type="checkbox"/> | Teaching Methods in Science |
| | | <input type="checkbox"/> | Safety Certification |

