Physical Science Composite Teaching -Secondary Education Licensure, BS

Program Description
The Utah Tech University Physical Sciences department offers a variety of courses in Chemistry, Engineering, Environmental Science, Geology, Geography, and Physics that allow students to better understand and appreciate the natural world and our place in it. Many of these courses fulfill the General Education Physical Science requirement for all students. Coursework and academic degrees offered in the Physical Sciences also fulfills prerequisites and requirements for students planning to pursue careers in natural sciences, chemistry, physics, engineering, environmental sciences, earth sciences, and medical and health sciences.

PROFESSIONAL LICENSURE/CERTIFICATION (PLC) REQUIREMENTS
The curriculum for programs at Utah Tech University customarily leading to licensure have been designed to meet the educational licensure/certification requirements in Utah as well as to prepare students to apply for licensure exams in the State of Utah. The licensure boards in each state are responsible for establishing the requirements for licensure/certification for their state. Requirement may vary state to state and may change at any time. Students who intend to use their Utah Tech degree to secure licensure in any state other than Utah will need to review the professional licensure disclosures in that state pertaining to their program and consult with the state professional licensing board. For more information, visit the State Authorization and Professional Licensure (https://academics.dixie.edu/state-authorization/) web page and select your program, or speak to the director of your program.

Admission Requirements for Secondary Education Program
To be admitted to the Secondary Education Program and enroll in professional courses:

• USBE R277-504-3 A(3) “requires candidates to maintain a cumulative university GPA of 3.0, and receive a C or better in all education related courses and major required content courses”

and students must pass the appropriate PRAXIS II content area subject test(s). In addition, one of the following must be completed:

• Students with BA/BS degrees in progress must have completed at least 95% of major coursework and have approval of major academic content area department advisor

• Students with completed BA/BS or higher degrees must have their transcripts reviewed by content area department advisor

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<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>SCI 4700</td>
<td>Secondary Science Teaching Methods</td>
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<td>SCED 3720</td>
<td>Reading Writing Content Areas (ALPP)</td>
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<td>SCED 4100</td>
<td>Curriculum and Instruction</td>
<td>3</td>
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<td>SCED 4200</td>
<td>Secondary Assessment</td>
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<td>SCED 4600</td>
<td>Classroom Management (ALPP)</td>
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<td>SCED 4300</td>
<td>Practicum Seminar</td>
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<td>SCED 4900</td>
<td>Secondary Student Teaching</td>
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<tr>
<td>SCED 4989</td>
<td>Student Teaching Capstone</td>
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Program Curriculum
121-123 credits

Utah Tech General Education Requirements
All Utah Tech General Education requirements must be fulfilled. A previously earned degree may fulfill those requirements, but courses must be equivalent to Utah Tech’s minimum General Education standards in American Institutions, English, and Mathematics.
### General Education Core Requirements

- **English**: 3-7 hours
- **Mathematics**: 3-5 hours
- **American Institutions**: 3-6 hours
- **Life Sciences**: 3-10 hours
- **Physical Sciences**: 3-5 hours
- **Laboratory Science**: 0-1 hour
- **Fine Arts**: 3 hours
- **Literature/Humanities**: 3 hours
- **Social & Behavioral Sciences**: 3 hours
- **Exploration**: 3-5 hours

### Secondary Education Program Requirements

#### Complete one of the following through General Education or elective credit:
- **HIST 1700**: American History (AI) 3 hours
- **or POLS 1100**: American Government (AI) 3 hours

#### Complete one of the following through General Education or elective credit:
- **FSHD 1500**: Human Development Lifespan (SS, GC) 3 hours
- **or PSY 1010**: General Psychology (SS, GC) 3 hours
- **or PSY 1100**: Human Development Through Lifespan (SS, GC) 3 hours

#### Complete the following program prerequisite courses:
- **EDUC 1010**: Foundations/Intro to Education 3 hours
- **EDUC 2010**: Intro to Exceptional Learners 3 hours
- **EDUC 2400**: Foundations Multicultural/ESL (SS, GC, ALCI) 3 hours
- **EDUC 2500**: Instructional Technology in K-12 Classrooms 3 hours
- **EDUC 3110**: Educational Psychology 3 hours

### Physical Science Core Requirements

#### Complete the following Chemistry requirements:
- **CHEM 1210 & CHEM 1215**: Principles of Chemistry I (PS)
- **CHEM 1220 & CHEM 1225**: Principles of Chemistry II
- **CHEM 2310 & CHEM 2315**: Organic Chemistry I
- **or CHEM 3000**: Quantitative Chemical Analysis

#### Complete the following Geology requirements:
- **GEO 1110 & GEO 1115**: Physical Geology (PS) and Physical Geology Lab (LAB)
- **GEO 1220 & GEO 1225**: Historical Geology and Historical Geology Lab
- **GEO 3060**: Environmental Geology

#### Complete the following Physics requirements:
- **PHYS 1040 & PHYS 1045**: Elementary Astronomy (PS) and Elementary Astronomy Lab (LAB)
- **PHYS 2210 & PHYS 2215**: Physics/Scientists Engineers I (PS) and Physics/Scientists Engineers I Lab (LAB)
- **PHYS 2220 & PHYS 2225**: Physics/Scientists EngineersII and Physics/Scientists Engineers II Lab
- **PHYS 3710**: Intermediate Modern Physics 3 hours

Complete the following Math/Science support courses:
BIOL 1610  Principles of Biology I (LS)  5
& BIOL 1615  and Principles of Biology I Lab (LAB)
MATH 1210  Calculus I (MA)  4
MATH 1220  Calculus II (MA)  4
SCI 2600  Lab Safety for Teachers  1
SCI 4800R  Independent Research  1

Complete one of the following:
CHEM 3510  Biochemistry I  3
or PHYS 3400  Classical Mechanics

Note:
Students who complete BIOL 3040 General Ecology and BIOL 3045 General Ecology Lab will also meet the requirements for an Earth Science endorsement.

Graduation Requirements

1. Complete a minimum of 121 college-level credits (1000 and above).
2. Complete at least 40 upper-division credits (3000 and above).
3. Complete at least 30 upper-division credits at Utah Tech for institutional residency.
4. Cumulative university GPA 3.0 or higher.
5. USBE R277-504-3 A(3) "requires candidates to maintain a cumulative university GPA of 3.0, and receive a C or better in all education related courses and major required content courses"
6. 3.0 GPA in program prerequisite and professional courses.