**BS in Physical Science Education (690128) MAP Sheet**

Physical and Mathematical Sciences, Physical Science Program

For students entering the degree program during the 2019-2020 curricular year.

This major is designed to prepare students to teach in public schools. In order to graduate with this major, students are required to complete Utah State Office of Education licensing requirements. To view these requirements go to http://education.byu.edu/ess/licensing.html or contact the Education Advisement Center, 350 MCKB, (801) 422-3426.

### University Core and Graduation Requirements

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Classes</th>
<th>Hours</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion Cornerstones</td>
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<tr>
<td>Teachings and Doctrine of The Book of Mormon</td>
<td>1</td>
<td>2.0</td>
<td>REL A 275</td>
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<tr>
<td>Jesus Christ and the Everlasting Gospel</td>
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<td>REL A 250</td>
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<td>Foundations of the Restoration</td>
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<td>REL C 225</td>
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<tr>
<td>The Eternal Family</td>
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<td>REL C 200</td>
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<td>The Individual and Society</td>
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<tr>
<td>American Heritage</td>
<td>1-2</td>
<td>3-6.0</td>
<td>from approved list</td>
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<tr>
<td>Global and Cultural Awareness</td>
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<td>3.0</td>
<td>SC ED 353*</td>
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<td>Skills</td>
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<td>First Year Writing</td>
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<tr>
<td>Advanced Written and Oral Communications</td>
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<td>Quantitative Reasoning</td>
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<td>Languages of Learning (Math or Language)</td>
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<td>3-20.0</td>
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<td>Arts, Letters, and Sciences</td>
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<tr>
<td>Civilization 1</td>
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<tr>
<td>Civilization 2</td>
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<tr>
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<tr>
<td>Letters</td>
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<td>3.0</td>
<td>PHIL 423*</td>
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<tr>
<td>Biological Science</td>
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<td>from approved list</td>
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<td>Physical Science</td>
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<td>CHEM 105* &amp; PHSCS 105*</td>
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<tr>
<td>Social Science</td>
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<td>Core Enrichment: Electives</td>
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<td>Graduation Requirements:</td>
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<td>Minimum residence hours required</td>
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<td>Minimum hours needed to graduate</td>
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</table>

### Suggested Sequence of Courses

#### FRESHMAN YEAR

**1st Semester**
- First Year Writing: 3.0
- Quantitative Reasoning: 3.0
- PHSCS 105 (FWSpSu): 1.0
- PHSCS 107: 1.0
- Religion Cornerstone course: 2.0
- Social Science: 3.0
- Total Hours: 15.0

**2nd Semester**
- American Heritage: 3.0
- Biological Science: 3.0
- PHSCS 106 (FWSu): 3.0
- PHSCS 108 (FWSu): 1.0
- Religion Cornerstone course: 2.0
- Languages of Learning: 3-4.0
- Total Hours: 15-16.0

#### SOPHOMORE YEAR

**3rd Semester**
- CHEM 105 (FWSpSu): 4.0
- GEOI 111 (FW): 4.0
- PHSCS 127 (FWSpSu): 3.0
- Civilization 1: 3.0
- Religion Cornerstone course: 2.0
- Total Hours: 16.0

**4th Semester**
- CHEM 106 (FWSpSu): 3.0
- CHEM 107 (FWSpSu): 1.0
- GEOI 112 (W): 4.0
- Civilization 2 & Arts: 3.0
- PHY S 276: 4.0
- Religion elective (FWSpSu): 2.0
- Total Hours: 17.0

#### JUNIOR YEAR

**5th Semester**
- CHEM 223 (FSp): 4.0
- CHEM 201 (FSp): 0.5
- CHEM 331: 3.0
- PHSCS 167: 3.0
- Adv. Written & Oral Communication: 3.0
- Religion elective (FWSpSu): 2.0
- Total Hours: 17.0

**6th Semester**
- Geol 210 Begins meeting before the start of fall semester
- IP & T 371: 1.0
- IP & T 372: 1.0
- Total Hours: 17.0

#### SENIOR YEAR

**7th Semester**
- Letters: 3.0
- PHY S 377 (FW): 3.0
- PHY S 378: 1.0
- SC ED 375: 3.0
- Requirement 2 elective: 3-4.0
- Religion elective (FWSpSu): 2.0
- Total Hours: 15-16.0

**8th Semester**
- PHY S 476 or 496 (FW): 12.0
- Total Hours: 12.0

Note: The sequence of courses suggested may not fit the circumstances of every student. Students should contact their college advisement center for help in outlining an efficient schedule.

Note: Students are encouraged to complete an average of 15 credit hours each semester or 30 credit hours each year, which could include spring and/or summer terms. Taking fewer credits substantially increases the cost and the number of semesters to graduate.
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For students accepted into the major after August 1, 2014, grades below C in any required coursework in a teaching major or teaching minor will not be accepted. Teacher candidates must maintain a total GPA of 3.0 or higher throughout the program and to qualify for student teaching. For details on admission and retention requirements for teaching majors and teaching minors, see Educator Preparation Program (EPP) Requirements.

**REQUIREMENT 1** Complete 17 courses

**NOTE FOR GEOL 210:** CONTACT GEOLOGICAL SCIENCES DEPARTMENT (S-389 ESC) BEFORE APRIL 15TH FOR DATES OF UPCOMING AUGUST FIELD TRIP.

- CHEM 105 - General College Chemistry 1 with Lab (Integrated) 4.0
- CHEM 106 - General College Chemistry 2 3.0
- CHEM 107 - General College Chemistry Laboratory 1.0
- CHEM 201 - Chemical Handling and Safe Laboratory Practices 0.5
- CHEM 223 - Quantitative and Qualitative Analysis 4.0
- CHEM 331 - Guided Learning for Chemistry Instruction 3.0
- GEOL 111 - Physical Geology 4.0
- GEOL 112 - Historical Geology 4.0
- GEOL 210 - Field Studies 3.0
- PHSCS 105 - General Physics 1 3.0
- PHSCS 106 - General Physics 2 3.0
- PHSCS 107 - General Physics Lab 1 1.0
- PHSCS 108 - General Physics Lab 2 1.0
- PHSCS 127 - Descriptive Astronomy 3.0
- PHCS 167 - Descriptive Acoustics of Music and Speech 3.0
- PHCS 310 - Physics By Inquiry: Mechanics 3.0

**REQUIREMENT 2** Complete 1 course

- GEOL 100 - Dinosaurs 3.0
- GEOL 351 - Mineralogy 4.0
- GEOL 370 - Sedimentology and Stratigraphy 3.0
- GEOL 480 - Paleontology 3.0
- *PHIL 423R - History and Philosophy of Science 3.0

**REQUIREMENT 3** Complete 2 options

**PROFESSIONAL EDUCATION COMPONENT:**

Licensure requirements: Contact Education Student Services, 350 MCKB, (801) 422-3426, to schedule the exit interview to clear your application for the secondary teaching license. You should be registered for your last semester at BYU prior to the scheduled appointment.

**OPTION 3.1** Complete 9 courses

- CPSE 402 - Educating Students with Disabilities in Secondary Classrooms 2.0
- IP&T 371 - Integrating K-12 Educational Technology 1
- IP&T 372 - Integrating K-12 Educational Technology 2 1.0
- IP&T 373 - Teaching in K-12 Online and Blended Learning Contexts 1.0
- PHY S 276 - Exploration of Teaching 4.0
- PHY S 377 - Teaching Methods and Instruction 3.0
- PHY S 378 - Practicum in Secondary Education 1.0
- *SC ED 353 - Multicultural Education for Secondary Education 3.0
- SC ED 375 - Adolescent Development and Classroom Management 3.0

Note: FBI fingerprint and background clearance must be completed prior to enrollment in Phy S 276.

**OPTION 3.2** Complete 12.0 hours from the following course(s)

APPLY FOR STUDENT TEACHING/INTERNSHIP ONE SEMESTER IN ADVANCE BY SEPTEMBER 30 OR JANUARY 31ST. APPLICATIONS ARE ONLINE AT WWW.BYU.EDU/FIELDSERVICES.HTML.

- PHY S 476 - Secondary Student Teaching 12.0v
- PHY S 496 - Academic Internship: Secondary Education 12.0v

Student teachers/interns must complete three forms in their LiveText accounts (PIBS, CDS, FED) and attach their TWS to the LiveText account for their program. All four must be completed to be cleared for graduation.

**THE DISCIPLINE:**

The Department of Teacher Education provides a program that licenses secondary teachers for public schools. In addition to content courses in the field(s) in which they plan to teach, students complete professional education courses and practicum experiences that prepare them to teach in a secondary school setting.

**CAREER OPPORTUNITIES:**

Secondary education teacher.

**MAP DISCLAIMER**

While every reasonable effort is made to ensure accuracy, there are some student populations that could have exceptions to listed requirements. Please refer to the university catalog and your college advisement center/department for complete guidelines.

**ADVISEMENT CENTER INFORMATION**

Physical and Mathematical Sciences College Advisement Center
Brigham Young University
N-181 ESC
Provo, UT 84602
Telephone: (801) 422-2674