**University Core and Graduation Requirements**

### University Core Requirements:

<table>
<thead>
<tr>
<th>Requirements</th>
<th>#Classes</th>
<th>Hours</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Religion Cornerstones</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Teachings and Doctrine of The Book of Mormon</td>
<td>1</td>
<td>2.0</td>
<td>REL A 275</td>
</tr>
<tr>
<td>Jesus Christ and the Everlasting Gospel</td>
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<td>REL A 250</td>
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<tr>
<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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<tr>
<td><strong>The Individual and Society</strong></td>
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<tr>
<td>American Heritage</td>
<td>1-2</td>
<td>3-6.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Global and Cultural Awareness</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td><strong>Skills</strong></td>
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<tr>
<td>First Year Writing</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
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<tr>
<td>Advanced Written and Oral Communications</td>
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<td>3.0</td>
<td>WRTG 316</td>
</tr>
<tr>
<td>Quantitative Reasoning</td>
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<td>4.0</td>
<td>MATH 112* or 113*</td>
</tr>
<tr>
<td>Languages of Learning (Math or Language)</td>
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<td>4.0</td>
<td>MATH 112* or 113*</td>
</tr>
<tr>
<td><strong>Arts, Letters, and Sciences</strong></td>
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<tr>
<td>Civilization 1</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Civilization 2</td>
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<td>3.0</td>
<td>from approved list</td>
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<tr>
<td>Arts</td>
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<td>3.0</td>
<td>from approved list</td>
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<tr>
<td>Letters</td>
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<td>3.0</td>
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<tr>
<td>Biological Science</td>
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<tr>
<td>Physical Science</td>
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<td>3.0</td>
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<tr>
<td>Social Science</td>
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<tr>
<td><strong>Core Enrichment: Electives</strong></td>
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<td>Religion Electives</td>
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<td>6.0</td>
<td>from approved list</td>
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<tr>
<td>Open Electives</td>
<td>Variable</td>
<td>Variable</td>
<td>personal choice</td>
</tr>
</tbody>
</table>

### Graduation Requirements:

- Minimum residence hours required: 30.0
- Minimum hours needed to graduate: 120.0

### Suggested Sequence of Courses

#### Freshman Year

**1st Semester**
- CS 142: 3.0
- First-year Writing or American Heritage: 3.0
- MATH 112: 4.0
- Religion Cornerstone course: 2.0
- General education, university requirements, and/or general electives: 3.0

**Total Hours:** 15.0

**2nd Semester**
- CS 202: 1.0
- CS 235: 3.0
- PHSCS 121 or MATH 112: 3.0
- First-year Writing or American Heritage: 3.0
- Religion Cornerstone course: 2.0

**Total Hours:** 16.0

#### Sophomore Year

**3rd Semester**
- CS 203: 1.0
- CS 224: 3.0
- CS 236: 3.0
- Biological Science: 3.0
- Civilization 1: 3.0
- Religion Cornerstone course: 2.0

**Total Hours:** 15.0

**4th Semester**
- CS 240: 4.0
- CS 260 or other C S elective: 3.0
- MATH 213: 2.0
- MATH 215: 1.0
- Civilization 2: 3.0
- Religion Cornerstone course: 2.0

**Total Hours:** 15.0

#### Junior Year

**5th Semester**
- CS 204: 1.0
- CS 312: 3.0
- CS 324: 3.0
- Social Science: 3.0
- STAT 121, STAT 201, or MATH 431: 3.0
- Religion Elective: 2.0

**Total Hours:** 15.0

**6th Semester**
- CS 329: 3.0
- CS 340: 3.0
- CS 452: 3.0
- Letters: 3.0
- Religion Elective: 2.0

**Total Hours:** 14.0

#### Senior Year

**7th Semester**
- CS 440: 3.0
- C S Elective: 3.0
- WRTG 316: 3.0
- Arts: 3.0
- Religion Elective: 2.0
- General education, university requirements, and/or general electives: 2.0

**Total Hours:** 16.0

**8th Semester**
- CS 480: 3.0
- C S Elective: 3.0
- C S Elective: 3.0
- C S Elective: 3.0
- C S 404: 2.0
- Global and Cultural Awareness: 3.0

**Total Hours:** 14.0
## BS in Computer Science: Software Engineering (693225)
### 2020-2021 Program Requirements (74 - 76 Credit Hours)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Complete 16 courses</td>
</tr>
<tr>
<td>2</td>
<td>Complete 4 courses</td>
</tr>
<tr>
<td>3</td>
<td>Complete 2 courses</td>
</tr>
<tr>
<td>4</td>
<td>Complete 2 courses</td>
</tr>
<tr>
<td>5</td>
<td>Complete 1 course</td>
</tr>
<tr>
<td>6</td>
<td>Complete 2 courses</td>
</tr>
<tr>
<td>7</td>
<td>Complete Senior Exit interview with the C S department during last semester or term.</td>
</tr>
</tbody>
</table>

### Supporting Courses:

- **General Education Requirements:**
  - MATH 112 - Calculus 1
  - MATH 113 - Calculus 2
  - PHSCS 121 - Introduction to Newtonian Mechanics
  - Phscs 121 - Technical Communication

- **Computer Science Core Courses:**
  - C S 455 - Foundations of Computer Science
  - C S 456 - Introduction to User Interface Software
  - C S 460 - Computer Communications and Networking
  - C S 462 - Large-Scale Distributed System Design
  - C S 465 - Computer Security
  - C S 466 - Verification and Validation

- **Supporting Courses:**
  - C S 224 - Introduction to Computer Systems
  - C S 235 - Data Structures and Algorithms
  - C S 236 - Discrete Structures
  - C S 240 - Advanced Programming Concepts
  - C S 312 - Algorithm Design and Analysis
  - C S 324 - Systems Programming
  - C S 329 - Testing, Analysis, and Verification
  - C S 340 - Software Design
  - C S 404 - Ethics and Computers in Society
  - C S 405 - Creating and Managing a Software Business
  - C S 480 - Software Engineering Capstone 1
  - C S 481 - Software Engineering Capstone 2

### Requirement 3
Complete 2 courses

- C S 455 - Fundamentals of Information Retrieval
- C S 456 - Introduction to User Interface Software
- C S 460 - Computer Communications and Networking
- C S 462 - Large-Scale Distributed System Design
- C S 465 - Computer Security
- C S 466 - Verification and Validation

### Requirement 4
Complete 4 courses

- C S 224 - Introduction to Computer Systems
- C S 235 - Data Structures and Algorithms
- C S 236 - Discrete Structures
- C S 240 - Advanced Programming Concepts
- C S 312 - Algorithm Design and Analysis
- C S 324 - Systems Programming
- C S 329 - Testing, Analysis, and Verification
- C S 340 - Software Design
- C S 404 - Ethics and Computers in Society
- C S 405 - Creating and Managing a Software Business
- C S 480 - Software Engineering Capstone 1
- C S 481 - Software Engineering Capstone 2

### Requirement 5
Complete 2 courses

- C S 224 - Introduction to Computer Systems
- C S 235 - Data Structures and Algorithms
- C S 236 - Discrete Structures
- C S 240 - Advanced Programming Concepts
- C S 312 - Algorithm Design and Analysis
- C S 324 - Systems Programming
- C S 329 - Testing, Analysis, and Verification
- C S 340 - Software Design
- C S 404 - Ethics and Computers in Society
- C S 405 - Creating and Managing a Software Business
- C S 480 - Software Engineering Capstone 1
- C S 481 - Software Engineering Capstone 2

### Requirement 6
Complete 2 courses

- C S 455 - Fundamentals of Information Retrieval
- C S 456 - Introduction to User Interface Software
- C S 460 - Computer Communications and Networking
- C S 462 - Large-Scale Distributed System Design
- C S 465 - Computer Security
- C S 466 - Verification and Validation

### Requirement 7
Complete Senior Exit interview with the C S department during last semester or term.

### Note:
- If C S 493R, C S 498R, or C S 501R is chosen, it must be taken for 3 credit hours.

### Department Information

**Computer Science Department**
Brigham Young University
3361 Talmage Building
Provo, UT 84602
Telephone: (801) 422-3027

**Advisement Center Information**

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