**University Core and Graduation Requirements**

### University Core Requirements:

#### Religion Cornerstones

<table>
<thead>
<tr>
<th>Class</th>
<th>Hours</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachings and Doctrine of The Book of Mormon</td>
<td>2.0</td>
<td>REL A 275</td>
</tr>
<tr>
<td>Jesus Christ and the Everlasting Gospel</td>
<td>2.0</td>
<td>REL A 250</td>
</tr>
<tr>
<td>Foundations of the Restoration</td>
<td>2.0</td>
<td>REL C 225</td>
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</table>

#### The Individual and Society

<table>
<thead>
<tr>
<th>Area</th>
<th>Hours</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Heritage</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Global and Cultural Awareness</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
</tbody>
</table>

#### Skills

<table>
<thead>
<tr>
<th>Area</th>
<th>Hours</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year Writing</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Advanced Written and Oral Communications</td>
<td>3.0</td>
<td>WRTG 316</td>
</tr>
<tr>
<td>Quantitative Reasoning</td>
<td>4.0</td>
<td>MATH 112 or 113*</td>
</tr>
<tr>
<td>Languages of Learning</td>
<td>4.0</td>
<td>MATH 112 or 113*</td>
</tr>
</tbody>
</table>

#### Arts, Letters, and Sciences

<table>
<thead>
<tr>
<th>Area</th>
<th>Hours</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civilization 1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Civilization 2</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Arts</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Letters</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Physical Science</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Social Science</td>
<td>3.0</td>
<td>from approved list</td>
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</tbody>
</table>

#### Core Enrichment: Electives

<table>
<thead>
<tr>
<th>Area</th>
<th>Hours</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion Electives</td>
<td>6.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Open Electives</td>
<td>Variable</td>
<td>variable 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

<table>
<thead>
<tr>
<th>1st Semester</th>
<th>Hours</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>C S 142</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>First-year Writing or American Heritage</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>MATH 112</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>Religion Cornerstone course</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>General education, university requirements, and/or general electives</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>15.0</strong></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>2nd Semester</th>
<th>Hours</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>C S 202</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>C S 235</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>PHSCS 121</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>First-year Writing or American Heritage</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>MATH 113</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>Religion Cornerstone course</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>16.0</strong></td>
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#### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>3rd Semester</th>
<th>Hours</th>
<th>Classes</th>
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<tbody>
<tr>
<td>C S 203</td>
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<td></td>
</tr>
<tr>
<td>C S 224</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>C S 236</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Biological Science</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Civilization 1</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Religion Cornerstone course</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>15.0</strong></td>
<td></td>
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<table>
<thead>
<tr>
<th>4th Semester</th>
<th>Hours</th>
<th>Classes</th>
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<tbody>
<tr>
<td>C S 240</td>
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</tr>
<tr>
<td>C S 260 or other C S elective</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>MATH 213</td>
<td>2.0</td>
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<tr>
<td>MATH 215</td>
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<td></td>
</tr>
<tr>
<td>Civilization 2</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Religion Cornerstone course</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
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#### JUNIOR YEAR

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<thead>
<tr>
<th>5th Semester</th>
<th>Hours</th>
<th>Classes</th>
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<tbody>
<tr>
<td>C S 204</td>
<td>1.0</td>
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</tr>
<tr>
<td>C S 312</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>C S 324</td>
<td>3.0</td>
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</tr>
<tr>
<td>Social Science</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>STAT 121, STAT 201, or MATH 431</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Religion Elective</td>
<td>2.0</td>
<td></td>
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<tr>
<td><strong>Total Hours</strong></td>
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<table>
<thead>
<tr>
<th>6th Semester</th>
<th>Hours</th>
<th>Classes</th>
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<tbody>
<tr>
<td>C S 329</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>C S 452</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Letters</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Religion Elective</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
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#### SENIOR YEAR

<table>
<thead>
<tr>
<th>7th Semester</th>
<th>Hours</th>
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<tbody>
<tr>
<td>C S 480</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>C S Elective</td>
<td>3.0</td>
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</tr>
<tr>
<td>WRTG 316</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Arts</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Religion Elective</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>General education, university requirements, and/or general electives</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
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<td></td>
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<table>
<thead>
<tr>
<th>8th Semester</th>
<th>Hours</th>
<th>Classes</th>
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</thead>
<tbody>
<tr>
<td>C S 481</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>C S Elective</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>MATH 213</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>C S 404</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Global and Cultural Awareness</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>14.0</strong></td>
<td></td>
</tr>
</tbody>
</table>
Grades below C- are not allowed in major courses.

**REQUIREMENT 1** Complete 16 courses

**CORE COURSES:**
- C S 142 - Introduction to Computer Programming
- C S 202 - Software Engineering Lab 1
- C S 203 - Software Engineering Lab 2
- C S 204 - Software Engineering Lab 3
- 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 452 - Database Modeling Concepts
- C S 480 - Software Engineering Capstone 1
- C S 481 - Software Engineering Capstone 2

**OPTION 3.1** Complete 4 courses

**SUPPORTING COURSES:**
- MATH 112 - Calculus 1
- MATH 113 - Calculus 2
- PHSCS 121 - Introduction to Newtonian Mechanics
- *WRTG 316 - Technical Communication

**OPTION 3.2** Complete 1 option

**OPTION 3.1 Complete 1 course**
- MATH 313 - (Not currently offered)

**OPTION 3.2 Complete 2 courses**
- MATH 213 - Elementary Linear Algebra
- MATH 215 - Computational Linear Algebra

**REQUIREMENT 2** Complete 4 courses

- C S 455 - Computer Graphics
- C S 456 - Fundamentals of Information Retrieval
- C S 462 - Large-Scale Distributed System Design
- C S 465 - Database Modeling Concepts
- C S 480 - Software Engineering Capstone 1
- C S 481 - Software Engineering Capstone 2

**REQUIREMENT 3** Complete 2 courses

- C S 455 - Computer Graphics
- C S 456 - Fundamentals of Information Retrieval

**REQUIREMENT 4** Complete 1 course

- STAT 121 - Principles of Statistics
- STAT 201 - Statistics for Engineers and Scientists
- C S 260 - Web Programming
- C S 330 - Concepts of Programming Languages
- C S 345 - Operating Systems Design
- C S 356 - Designing the User Experience
- C S 453 - Fundamentals of Information Retrieval

**REQUIREMENT 5** Complete 2 courses

- C S 452 - Database Modeling Concepts
- C S 480 - Software Engineering Capstone 1

**REQUIREMENT 6** Complete 2 courses

- C S 252 - Introduction to Computational Theory
- C S 260 - Web Programming
- C S 330 - Concepts of Programming Languages
- C S 345 - Operating Systems Design
- C S 355 - Interactive Graphics and Image Processing
- C S 356 - Designing the User Experience
- C S 401R - Topics in Computer Science
- C S 412 - Linear Programming and Convex Optimization
- C S 450 - Computer Vision
- C S 453 - Introduction to Computer Programming
- C S 460 - Computer Communications and Networking
- C S 462 - Large-Scale Distributed System Design
- C S 465 - Database Modeling Concepts
- C S 470 - Introduction to Artificial Intelligence
- C S 472 - Introduction to Machine Learning
- C S 474 - Introduction to Deep Learning
- C S 486 - Verification and Validation
- C S 493R - Computing Competitions
- C S 497R - Undergraduate Research
- C S 498R - Undergraduate Special Projects
- C S 513 - Robust Control
- EN 424 - Computer Systems
- EN 425 - Real-Time Operating Systems

**REQUIREMENT 7** Complete 3 courses

**REQUIREMENT 8**

Courses will not double count between Requirement 5 and Requirement 6.

**REQUIREMENT 9** Complete 2 courses

- C S 452 - Database Modeling Concepts
- C S 480 - Software Engineering Capstone 1

**REQUIREMENT 10** Complete 1 course

- C S 404 - Ethics and Computers in Society
- C S 455 - Computer Graphics
- C S 456 - Fundamentals of Information Retrieval
- C S 460 - Computer Communications and Networking
- C S 462 - Large-Scale Distributed System Design
- C S 465 - Database Modeling Concepts
- C S 470 - Introduction to Artificial Intelligence
- C S 472 - Introduction to Machine Learning
- C S 474 - Introduction to Deep Learning
- C S 486 - Verification and Validation
- C S 493R - Computing Competitions
- C S 497R - Undergraduate Research
- C S 498R - Undergraduate Special Projects
- C S 513 - Robust Control
- EN 424 - Computer Systems
- EN 425 - Real-Time Operating Systems

**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.

**DEPARTMENT INFORMATION**

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Provo, UT 84602
Telephone: (801) 422-3027

**ADVISEMENT CENTER INFORMATION**

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N-181 ESC
Provo, UT 84602
Telephone: (801) 422-2674