### University Core Requirements:

#### Religion Cornerstones
- Teachings and Doctrine of The Book of Mormon
- Jesus Christ and the Everlasting Gospel
- Foundations of the Restoration
- The Eternal Family

#### Global and Cultural Awareness
- American Heritage

#### Skills
- First Year Writing
- Quantitative Reasoning
- Languages of Learning (Math or Language)

#### Arts, Letters, and Sciences
- Civilization
- Arts
- Letters
- Biological Science
- Physical Science
- Social Science

#### Core Enrichment: Electives
- Religion Electives
- Open Electives

#### Graduation Requirements:
- Minimum residence hours required: 30.0
- Minimum hours needed to graduate: 120.0

### Suggested Sequence of Courses

#### FRESHMAN YEAR
- **1st Semester**:
  - C S 142
  - First Year Writing or American Heritage
  - MATH 112
  - General education courses, university requirements, and/or general electives
  - Religion Cornerstone course
  - Total Hours: 15.0

- **2nd Semester**:
  - C S 235
  - PHSCS 121
  - First Year Writing or American Heritage
  - MATH 113
  - Religion Cornerstone course
  - Total Hours: 15.0

#### SOPHOMORE YEAR
- **3rd Semester**:
  - C S 224
  - C S 236
  - Biological Science
  - STAT 121 or STAT 201 or MATH 431
  - Religion Cornerstone course
  - Total Hours: 14.0

- **4th Semester**:
  - C S 240
  - Letters
  - Civilization 1
  - MATH 213
  - Religion Cornerstone course
  - Total Hours: 15.0

#### JUNIOR YEAR
- **5th Semester**:
  - C S 312
  - C S 324
  - STAT 330 or ECON 388
  - Social Science
  - Civilization 2
  - Total Hours: 15.0

- **6th Semester**:
  - C S 472
  - C S 452
  - DS Elective
  - Religion Elective
  - Total Hours: 14.0

#### SENIOR YEAR
- **7th Semester**:
  - C S 474
  - C S 494 - DS Capstone 1 or CS elective
  - WRTG 316
  - Arts
  - General education courses, university requirements, and/or general electives
  - Religion Elective
  - Total Hours: 16.0

- **8th Semester**:
  - C S 495 - DS Capstone 2 or C S elective
  - C S Elective or DS elective
  - C S Elective
  - Social Science
  - Global and Cultural Awareness
  - Religion Elective
  - Total Hours: 16.0
### BS in Computer Science: Data Science (693224)
#### 2020-2021 Program Requirements (74 Credit Hours)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Requirement 1</strong>&lt;br&gt;Complete 11 courses</td>
<td>CS 142 - Introduction to Computer Programming 3.0&lt;br&gt;CS 224 - Introduction to Computer Systems 3.0&lt;br&gt;CS 235 - Data Structures and Algorithms 3.0&lt;br&gt;CS 236 - Discrete Structures 3.0&lt;br&gt;CS 240 - Advanced Programming Concepts 4.0&lt;br&gt;CS 312 - Algorithm Design and Analysis 3.0&lt;br&gt;CS 324 - Systems Programming 3.0&lt;br&gt;CS 404 - Ethics and Computers in Society 2.0&lt;br&gt;CS 452 - Database Modeling Concepts 3.0&lt;br&gt;CS 472 - Introduction to Machine Learning 3.0&lt;br&gt;CS 474 - Introduction to Deep Learning 3.0</td>
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<td><strong>Requirement 2</strong>&lt;br&gt;Complete 4 courses</td>
<td>MATH 112 - Calculus 1 4.0&lt;br&gt;MATH 113 - Calculus 2 4.0&lt;br&gt;PHSCS 121 - Introduction to Newtonian Mechanics 3.0&lt;br&gt;&quot;WRTG 316 - Technical Communication 3.0</td>
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<tr>
<td><strong>Requirement 3</strong>&lt;br&gt;Complete 1 course</td>
<td>MATH 233 - (Not currently offered)</td>
<td>3.0</td>
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<tr>
<td><strong>Requirement 4</strong>&lt;br&gt;Complete 2 courses</td>
<td>MATH 213 - Elementary Linear Algebra 2.0&lt;br&gt;MATH 215 - Computational Linear Algebra 1.0</td>
<td>3.0</td>
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<tr>
<td><strong>Requirement 5</strong>&lt;br&gt;Complete 1 course</td>
<td>STAT 121 - Principles of Statistics 3.0&lt;br&gt;STAT 201 - Statistics for Engineers and Scientists 3.0</td>
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<td><strong>Requirement 6</strong>&lt;br&gt;Complete 3.0 hours from the following course(s)</td>
<td>C S 412 - Linear Programming and Convex Optimization 3.0&lt;br&gt;ECON 378 - Statistics for Economists 3.0&lt;br&gt;ECON 388 - Introduction to Econometrics 3.0&lt;br&gt;ECON 488 - Applied Econometrics 3.0&lt;br&gt;FINC 588 - Advanced Econometrics 3.0&lt;br&gt;LING 581 - Natural Language Processing 3.0&lt;br&gt;MATH 314 - Calculus of Several Variables 3.0&lt;br&gt;MATH 413 - Advanced Linear Algebra 3.0&lt;br&gt;STAT 240 - Probability and Inference 1 3.0&lt;br&gt;STAT 251 - Introduction to Bayesian Statistics 3.0</td>
<td>3.0</td>
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<tr>
<td><strong>Requirement 7</strong>&lt;br&gt;Complete 12.0 hours from the following course(s)</td>
<td>STAT 340 - Probability and Inference 2 3.0&lt;br&gt;ECON 378 - Statistics for Economists 3.0&lt;br&gt;ECON 388 - Introduction to Econometrics 3.0&lt;br&gt;ECON 488 - Applied Econometrics 3.0&lt;br&gt;FINC 588 - Advanced Econometrics 3.0&lt;br&gt;MATH 314 - Calculus of Several Variables 3.0&lt;br&gt;MATH 413 - Advanced Linear Algebra 3.0&lt;br&gt;STAT 240 - Probability and Inference 1 3.0&lt;br&gt;STAT 251 - Introduction to Bayesian Statistics 3.0</td>
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<tr>
<td><strong>Requirement 8</strong>&lt;br&gt;Complete 11 courses</td>
<td>C S 401R - Topics in Computer Science 3.0&lt;br&gt;C S 403R - Operating Systems Design 3.0&lt;br&gt;C S 405R - Software Design 3.0&lt;br&gt;C S 406R - Computer Security 3.0&lt;br&gt;C S 407R - Introduction to Artificial Intelligence 3.0&lt;br&gt;C S 482R - Data Science Capstone 1 3.0&lt;br&gt;C S 483R - Data Science Capstone 2 3.0&lt;br&gt;C S 486R - Verification and Validation 3.0&lt;br&gt;C S 497R - Undergraduate Research 3.0</td>
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<tr>
<td><strong>Requirement 9</strong>&lt;br&gt;Complete Senior Exit Interview with the Computer Science department during last semester or term.</td>
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**Note:**
- Students can take C S 401R or C S 403R more than once.
- Total hours for C S 497R across all requirements cannot exceed 6.0.
- You may take up to 12 credit hours.
- You may take this course up to 1 time.
- You may take up to 12 credit hours.
- You may take up to 3 credit hours.
- You may take up to 3 credit hours.

**Additional Notes:**
- Math 112, Math 113, Phscs 121, Engl 316, and C S 312 can be used to fill both General Education and program requirements. Advanced Writing and Oral Communication: Engl 316. Quantitative Reasoning: Math 112 or 113.
- Languages of Learning: Math 112 or 113. Physical Science: C S 312 or Phscs 121.
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.

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