# 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>
<td></td>
</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>
<td>1</td>
<td>2.0</td>
<td>REL A 250</td>
</tr>
<tr>
<td>Foundations of the Restoration</td>
<td>1</td>
<td>2.0</td>
<td>REL C 225</td>
</tr>
<tr>
<td>The Eternal Family</td>
<td>1</td>
<td>2.0</td>
<td>REL C 200</td>
</tr>
<tr>
<td><strong>The Individual and Society</strong></td>
<td></td>
<td></td>
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</tr>
<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>
<td></td>
<td></td>
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</tr>
<tr>
<td>First Year Writing</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Advanced Written and Oral Communications</td>
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<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Quantitative Reasoning</td>
<td>1</td>
<td>4.0</td>
<td>MATH 112*</td>
</tr>
<tr>
<td>Languages of Learning (Math or Language)</td>
<td>1</td>
<td>4.0</td>
<td>MATH 112*</td>
</tr>
<tr>
<td><strong>Arts, Letters, and Sciences</strong></td>
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</tr>
<tr>
<td>Civilization 1</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Civilization 2</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Arts</td>
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<td>3.0</td>
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</tr>
<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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<td>3-4.0</td>
<td>from approved list</td>
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<tr>
<td>Physical Science</td>
<td>1-2</td>
<td>3-7.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Social Science</td>
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<td>3.0</td>
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<tr>
<td><strong>Core Enrichment: Electives</strong></td>
<td></td>
<td></td>
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<tr>
<td>Religion Electives</td>
<td>3-4</td>
<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>

*These classes fill both University Core and Program Requirements (7 hours overlap)

## Graduation Requirements:

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

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## Suggested Sequence of Courses

### FRESHMAN YEAR

**1st Semester**
- 1st Year Writing or American Heritage: 3.0
- MATH 112: 4.0
- STAT 121: 3.0
- STAT 130: 0.5
- Religion Cornerstone course: 2.0
- Total Hours: 15.0

**2nd Semester**
- American Heritage or 1st Year Writing: 3.0
- MATH 113: 4.0
- PHYS 100: 3.0
- STAT 230: 3.0
- Religion Cornerstone course: 2.0
- Total Hours: 15.0

### SOPHOMORE YEAR

**3rd Semester**
- MATH 112: 4.0
- Biological Science: 3.0
- Global and Cultural Awareness: 3.0
- Religion Cornerstone course: 2.0
- General electives: 1.0
- Total Hours: 15.0

**4th Semester**
- STAT 123: 1.5
- STAT 223: 1.5
- STAT 330: 3.0
- Civilizations 2: 3.0
- Religion Cornerstone course: 2.0
- General electives: 3.0
- General electives: 1.0
- Total Hours: 15.0

### JUNIOR YEAR

**5th Semester**
- Requirement 4 Elective #1: 1.5
- Requirement 4 Elective #2: 1.5
- Advanced Written and Oral Communication: 3.0
- Religion elective: 2.0
- Total Hours: 15.0

**6th Semester**
- Statistics elective: 3.0
- Statistics elective: 3.0
- Letters: 3.0
- Religion elective: 2.0
- General Elective: 4.0
- Total Hours: 15.0

### SENIOR YEAR

**5th Semester**
- Requirement 4 Elective #1: 1.5
- Requirement 4 Elective #2: 1.5
- Advanced Written and Oral Communication: 3.0
- Religion elective: 2.0
- Total Hours: 15.0

**6th Semester**
- Statistics elective: 3.0
- Statistics elective: 3.0
- Letters: 3.0
- Religion elective: 2.0
- General Elective: 4.0
- Total Hours: 15.0

**7th Semester**
- Statistics elective: 3.0
- Statistics elective: 3.0
- Letters: 3.0
- Religion elective: 2.0
- General Elective: 4.0
- Total Hours: 15.0

**8th Semester**
- Statistics elective: 3.0
- Statistics elective: 3.0
- Letters: 3.0
- Religion elective: 2.0
- General Elective: 4.0
- Total Hours: 15.0

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**Note 1:** Students should take STAT 130 the semester he/she declares himself/herself as a Statistics Major.

**Note 2:** 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 3:** 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.

**Note 4:** Students must have the statistics core completed before their senior year in order to graduate within four years.
### BS in Statistics: Applied Statistics & Analytics (695234)

#### 2020-2021 Program Requirements (50.5 Credit Hours)

#### REQUIREMENT 1: Complete 2 courses
- STAT 121 - Principles of Statistics
- MATH 112 - Calculus 1

#### REQUIREMENT 2: Complete 2 courses
- STAT 130 - Introduction to the Department of Statistics
- MATH 113 - Calculus 2

#### REQUIREMENT 3: Complete 6 courses
- STAT 531
- STAT 495R - Special Topics in Statistics
- STAT 477
- STAT 475
- STAT 466
- STAT 435

#### REQUIREMENT 4: Complete 3.0 hours from the following course(s)
- STAT 538
- STAT 531
- STAT 497R - Introduction to Statistical Research
- STAT 496R - Academic Internship: Statistics
- STAT 495R - Special Topics in Statistics
- STAT 477

#### REQUIREMENT 5: Complete 2 courses
- STAT 469
- STAT 451

#### REQUIREMENT 6: Complete 15.0 hours from the following course(s)
- STAT 462 - Statistical Distributions for Actuarial Modeling and Data Analytics
- STAT 450 - Nonparametric Statistical Methods
- STAT 437 - Applications in Biostatistics
- STAT 435 - Applied Bayesian Statistics
- STAT 462 - Quality Control and Industrial Statistics
- STAT 466 - Introduction to Reliability
- STAT 469 - Analysis of Correlated Data
- STAT 475 - Life Contingencies
- STAT 477 - Statistical Distributions for Actuarial Modeling and Data Analysis
- STAT 495R - Special Topics in Statistics
- STAT 531 - Experimental Design
- STAT 538 - Survival Analysis

**NOTE: COURSES USED IN REQUIREMENTS 4 AND 5 WILL NOT DOUBLE COUNT HERE.**

#### STATISTICS CORE COURSES:
- STAT 123 - Introduction to R Programming
- STAT 222 - Applied R Programming
- STAT 230 - Analysis of Variance
- STAT 240 - Probability and Inference 1
- STAT 330 - Introduction to Regression
- STAT 340 - Probability and Inference 2

#### PREPARATION CORE COURSES:
- STAT 226
- STAT 224
- STAT 126
- STAT 125
- STAT 124
- STAT 340
- STAT 330

#### STATISTICS CORE COURSES:
- MATH 113
- MATH 112
- MATH 111
- IS 515
- IS 520
- IS 521
- IS 522

#### CAREER OPPORTUNITIES:
Typical employment upon graduation would include statisticians in government agencies (for example, the U.S. Census Bureau), database administrators focusing on SAS programming, and entry-level analysts involved in collecting, analyzing, and reporting results (for example, in market research). A feature of this emphasis is the large number of electives that allow students to customize their preparation toward the professional area of their interest or the emerging fields of analytics and data science. Students can deepen their expertise in experimental design, regression modeling, Bayesian inference, computing and big data, survey sampling, quality control, reliability and survival analysis.

#### CERTIFICATION:
- **ASQ Certified Quality Process Analyst (CQPA).** Students interested in employment as quality analysts should take Stat 462 to prepare for certification by the ASQ as described in asq.org/higher-education/why-quality/cqpcertification-competitive-edge.html. Highly motivated students may also prepare on their own with the materials and practice exams through ce.byu.edu/cw/prodev.

SAS/BYU Applied Statistics and Advanced SAS Programming Certificate. Students who earn a B or higher in the applied and computing core classes (Stat 124, 224, 230, 330, 381) are eligible to receive a certificate jointly issued by SAS and BYU which can be listed on a resume. More information is available at https://statistics.byu.edu/content/sas-certificate-opportunities.

INTERNSHIPS:

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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