### 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>
<td></td>
</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>
<td></td>
</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 Commun.</td>
<td>1</td>
<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>
<td></td>
<td></td>
<td></td>
</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>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Letters</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Biological Science</td>
<td>1-2</td>
<td>3-4.0</td>
<td>from approved list</td>
</tr>
<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>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td><strong>Core Enrichment: Electives</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religion Electives</td>
<td>3-4</td>
<td>6.0</td>
<td>from approved list</td>
</tr>
<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:

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum residence hours required</td>
<td>30.0</td>
</tr>
<tr>
<td>Minimum hours needed to graduate</td>
<td>120.0</td>
</tr>
</tbody>
</table>

### Suggested Sequence of Courses

#### Freshman Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Semester</td>
<td>15.0</td>
</tr>
<tr>
<td>2nd Semester</td>
<td>15.0</td>
</tr>
</tbody>
</table>

#### Sophomore Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd Semester</td>
<td>15.0</td>
</tr>
<tr>
<td>4th Semester</td>
<td>15.0</td>
</tr>
</tbody>
</table>

#### Junior Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th Semester</td>
<td>15.0</td>
</tr>
<tr>
<td>6th Semester</td>
<td>15.0</td>
</tr>
</tbody>
</table>

#### Senior Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th Semester</td>
<td>18.0</td>
</tr>
<tr>
<td>8th Semester</td>
<td>15.0</td>
</tr>
</tbody>
</table>

### Notes

**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)

**No more than three hours of credit below C- is allowed in major courses.**

**REQUIREMENT 1** Complete 2 courses
- STAT 121 - Principles of Statistics 3.0
- STAT 130 - Introduction to the Department of Statistics 0.5

**REQUIREMENT 2** Complete 2 courses

**PREPARATION CORE COURSES:**
- ^MATH 112 - Calculus 1 4.0
- MATH 113 - Calculus 2 4.0

**REQUIREMENT 3** Complete 6 courses

**STATISTICS CORE COURSES:**
- STAT 123 - Introduction to R Programming 1.5
- STAT 223 - Applied R Programming 1.5
- STAT 230 - Analysis of Variance 3.0
- STAT 240 - Probability and Inference 1 3.0
- STAT 330 - Introduction to Regression 3.0
- STAT 340 - Probability and Inference 2 3.0

**REQUIREMENT 4** Complete 3.0 hours from the following course(s)
- STAT 124 - SAS Base Programming Skills 1.5
- STAT 125 - Introduction to Operating Systems, Linux/Unix, and Shell Prog 1.5
- STAT 126 - Introduction to Python Programming 1.5
- STAT 224 - Applied SAS Programming 1.5
- STAT 226 - SQL 1.5
- STAT 234 - Methods of Survey Sampling 3.0
- STAT 231 - Introduction to Bayesian Statistics 3.0
- STAT 274 - Theory of Interest 3.0
- STAT 377 - Statistical Models for Financial Economics 3.0
- STAT 381 - Statistical Computing 3.0
- STAT 420 - Big Data Science 1 3.0
- STAT 421 - Big Data Science 2 3.0
- STAT 426 - Data Science Methods and Applications in Statistics 3.0
- STAT 435 - Nonparametric Statistical Methods 3.0
- STAT 437 - Applications in Biostatistics 3.0
- STAT 445 - Applied Bayesian Statistics 3.0
- STAT 462 - Quality Control and Industrial Statistics 3.0
- STAT 466 - Introduction to Reliability 3.0
- STAT 469 - Analysis of Correlated Data 3.0
- STAT 475 - Life Contingencies 3.0
- STAT 477 - Analysis for Actuarial Modeling and Data Analysis 3.0
- STAT 495R - Special Topics in Statistics 3.0
- STAT 531 - Experimental Design 3.0

**REQUIREMENT 5** Complete 2 courses

**THE DISCIPLINE:**

Statisticians apply sophisticated methods to increasingly massive data sets to discover insights into important business, government, and health policy questions. The curriculum and degrees offered through the Department of Statistics are designed to equip students with decision-making skills for careers as professional statisticians in industrial organizations, government agencies, insurance companies, pharmaceutical companies, universities, and research institutes.

**REQUIREMENT 6** Complete 15.0 hours from the following course(s)

**NOTE: COURSES USED IN REQUIREMENTS 4 AND 5 WILL NOT DOUBLE COUNT HERE.**
- C S 142 - Introduction to Computer Programming 3.0
- IS 315 - Spreadsheets for Business Analysis 3.0
- IS 520 - Business Programming and Spreadsheet Automation 3.0
- MATH 213 - Elementary Linear Algebra 2.0
- MATH 215 - Computational Linear Algebra 1.0
- MATH 314 - Calculus of Several Variables 3.0
- STAT 124 - SAS Base Programming Skills 1.5
- STAT 125 - Introduction to Operating Systems, Linux/Unix, and Shell Prog 1.5
- STAT 126 - Introduction to Python Programming 1.5
- STAT 224 - Applied SAS Programming 1.5
- STAT 226 - SQL 1.5
- STAT 234 - Methods of Survey Sampling 3.0
- STAT 231 - Introduction to Bayesian Statistics 3.0
- STAT 274 - Theory of Interest 3.0
- STAT 377 - Statistical Models for Financial Economics 3.0
- STAT 381 - Statistical Computing 3.0
- STAT 420 - Big Data Science 1 3.0
- STAT 421 - Big Data Science 2 3.0
- STAT 426 - Data Science Methods and Applications in Statistics 3.0
- STAT 435 - Nonparametric Statistical Methods 3.0
- STAT 437 - Applications in Biostatistics 3.0
- STAT 445 - Applied Bayesian Statistics 3.0
- STAT 462 - Quality Control and Industrial Statistics 3.0
- STAT 466 - Introduction to Reliability 3.0
- STAT 469 - Analysis of Correlated Data 3.0
- STAT 475 - Life Contingencies 3.0
- STAT 477 - Analysis for Actuarial Modeling and Data Analysis 3.0
- STAT 495R - Special Topics in Statistics 3.0
- STAT 531 - Experimental Design 3.0
- STAT 538 - Survival Analysis 3.0
- STAT 636 - Nonparametric Statistical Methods 3.0
- STAT 637 - Applications in Biostatistics 3.0
- STAT 645 - Applied Bayesian Statistics 3.0
- STAT 662 - Quality Control and Industrial Statistics 3.0
- STAT 666 - Introduction to Reliability 3.0
- STAT 669 - Analysis of Correlated Data 3.0
- STAT 675 - Life Contingencies 3.0
- STAT 677 - Analysis for Actuarial Modeling and Data Analysis 3.0
- STAT 695R - Special Topics in Statistics 3.0
- STAT 696R - Academic Internship: Statistics 9.0
- STAT 697R - Introduction to Statistical Research 3.0
- STAT 698R - Advanced Statistical Research 3.0
- STAT 699R - Thesis 3.0

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

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**STATISTICAL COMPUTING**

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/cqapacertification-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.

**DEPARTMENT INFORMATION**
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**ADVISEMENT CENTER INFORMATION**
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Provo, UT 84602
Telephone: (801) 422-2674