## University Core Requirements

### Religion Cornerstones
- Teachings and Doctrine of The Book of Mormon
  - 1
  - 2.0 from approved list
- Jesus Christ and the Everlasting Gospel
  - 1
  - 2.0 from approved list
- Foundations of the Restoration
  - 1
  - 2.0 REL C 225
- The Eternal Family
  - 1
  - 2.0 from approved list

### The Individual and Society
- American Heritage
  - 1-2
  - 3-6.0 from approved list
- Global and Cultural Awareness
  - 1
  - 3.0 from approved list

### Skills
- First Year Writing
  - 1
  - 3.0 from approved list
- Advanced Written and Oral Communications
  - 1
  - 3.0 from approved list
- Quantitative Reasoning
  - 1
  - 4.0 MATH 112*
- Languages of Learning (Math or Language)
  - 1
  - 4.0 MATH 112*

### Arts, Letters, and Sciences
- Civilization 1
  - 1
  - 3.0 from approved list
- Civilization 2
  - 1
  - 3.0 from approved list
- Arts
  - 1
  - 3.0 from approved list
- Letters
  - 1
  - 3.0 from approved list
- Biological Science
  - 1
  - 3-4.0 from approved list
- Physical Science
  - 1-2
  - 3-7.0 from approved list
- Social Science
  - 1
  - 3.0 from approved list

### Core Enrichment: Electives
- Religion Electives
  - 3-4
  - 6.0 from approved list
- Open Electives
  - Variable
  - Variable
  - personal choice

*These classes fill both University Core and Program Requirements (4 hours overlap)

## 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>
</tr>
</thead>
<tbody>
<tr>
<td>First Year Writing</td>
<td>3.0</td>
</tr>
<tr>
<td>MATH 112 (FWSpSu)</td>
<td>4.0</td>
</tr>
<tr>
<td>STAT 121</td>
<td>3.0</td>
</tr>
<tr>
<td>STAT 130</td>
<td>0.5</td>
</tr>
<tr>
<td>Arts</td>
<td>3.0</td>
</tr>
<tr>
<td>Religion Cornerstone course</td>
<td>2.0</td>
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<tr>
<td><strong>Total Hours</strong></td>
<td><strong>15.5</strong></td>
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<table>
<thead>
<tr>
<th>2nd Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Heritage</td>
<td>3.0</td>
</tr>
<tr>
<td>MATH 113 (FWSpSu)</td>
<td>4.0</td>
</tr>
<tr>
<td>STAT 230</td>
<td>3.0</td>
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<tr>
<td>Religion Cornerstone course</td>
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<tr>
<td><strong>Total Hours</strong></td>
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### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>3rd Semester</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MATH 213</td>
<td>2.0</td>
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<tr>
<td>MATH 215</td>
<td>1.0</td>
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<tr>
<td>STAT 240</td>
<td>3.0</td>
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<tr>
<td>STAT 250</td>
<td>3.0</td>
</tr>
<tr>
<td>Biological Science</td>
<td>3.0</td>
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<tr>
<td>Religion Cornerstone course</td>
<td>2.0</td>
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<tr>
<td><strong>Total Hours</strong></td>
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<table>
<thead>
<tr>
<th>4th Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 314 (FWSpSu)</td>
<td>3.0</td>
</tr>
<tr>
<td>STAT 330</td>
<td>3.0</td>
</tr>
<tr>
<td>Global and Cultural Awareness</td>
<td>3.0</td>
</tr>
<tr>
<td>Letters</td>
<td>3.0</td>
</tr>
<tr>
<td>Religion Cornerstone course</td>
<td>2.0</td>
</tr>
<tr>
<td>Open Electives</td>
<td>2.0</td>
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<tr>
<td><strong>Total Hours</strong></td>
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### JUNIOR YEAR

<table>
<thead>
<tr>
<th>5th Semester</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Requirement 4 Elective #1</td>
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<tr>
<td>Requirement 4 Elective #2</td>
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<tr>
<td>Adv. Written and Oral Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>Civilization 1</td>
<td>3.0</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>
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<tbody>
<tr>
<td>Requirement 6 Elective #1</td>
<td>3.0</td>
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<tr>
<td>Requirement 7 Elective #1</td>
<td>3.0</td>
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<tr>
<td>Civilization 2</td>
<td>3.0</td>
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<tr>
<td>Religion elective</td>
<td>2.0</td>
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<tr>
<td><strong>Total Hours</strong></td>
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### SENIOR YEAR

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<thead>
<tr>
<th>7th Semester</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Requirement 7 Elective #2</td>
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</tr>
<tr>
<td>Requirement 7 Elective #3</td>
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<tr>
<td>Open Electives</td>
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<tr>
<td><strong>Total Hours</strong></td>
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<table>
<thead>
<tr>
<th>8th Semester</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Requirement 7 Elective #4</td>
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<tr>
<td>Social Science</td>
<td>3.0</td>
</tr>
<tr>
<td>Open Electives</td>
<td>6.0</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>15.0</strong></td>
</tr>
</tbody>
</table>

Note 1: Students should take STAT 130 the semester they declare themselves 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, including spring and/or summer terms, to reach the 120 credit minimum needed to graduate. Taking fewer credits substantially increases 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.

Note 5: Open elective credits can be classes of your choosing, classes for a minor, or credits that have already been earned through AP classes, transfer credits, etc.
### Requirements

**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 5 courses

### Mathematical Foundation Courses:
- STAT 495R - Special Topics in Statistics
- STAT 475
- STAT 469
- STAT 466
- STAT 451
- STAT 435
- STAT 426
- STAT 421
- STAT 420
- MATH 314
- STAT 226
- STAT 125
- MATH 215
- *MATH 112
- STAT 340
- STAT 240
- STAT 130
- STAT 121

### Mathematical Foundation Courses:
- MATH 112 - Calculus 1 4.0
- MATH 113 - Calculus 2 4.0
- MATH 213 - Elementary Linear Algebra 2.0
- MATH 215 - Computational Linear Algebra 1.0

**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 251 - 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 451 - 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 - Statistical Distributions for Actuarial Modeling and Data Analytic 3.0
- STAT 495R - Special Topics in Statistics 3.0v

**Requirement 5**: Complete 1 course
- STAT 531 - Experimental Design 3.0
- STAT 538 - Survival Analysis 3.0

**Requirement 6**: Complete 6.0 hours from the following course(s)
- STAT 495R - Special Topics in Statistics 3.0v
- STAT 531 - Experimental Design 3.0
- STAT 538 - Survival Analysis 3.0

### Requirement 7:
Complete 12.0 hours from the following course(s)

**Note**: Courses Used in Requirements 4 and 6 Will Not Double Count Here.
- CS 142 - Introduction to Computer Programming 3.0
- MATH 334 - Ordinary Differential Equations 3.0
- MATH 341 - Theory of Analysis 1 3.0
- MATH 342 - Theory of Analysis 2 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 251 - 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 451 - 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 - Statistical Distributions for Actuarial Modeling and Data Analytic 3.0
- STAT 495R - Special Topics in Statistics 3.0v

### CAREER OPPORTUNITIES:

The increase of big data and analytics across disciplines is creating new challenges and opportunities for statisticians. The Statistical Science emphasis prepares students to enter competitive graduate programs in statistics. The technical tools statisticians acquire are useful in many areas and for this reason a statistics degree is also excellent preparation for public administration. Recent alumni who did not go to graduate school are working at Adobe, Saks Fifth Avenue, Qualtrics, Milliman, Pariveda Solutions, and the Utah Governor’s Office of Planning and Budget.

### Certification:

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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BS in Statistics: Statistical Science (695220)
2021-2022

FACULTY ADVISOR:
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Telephone: (801) 422-7054

ADVISEMENT CENTER INFORMATION
FOR UNIVERSITY CORE OR PROGRAM QUESTIONS, CONTACT THE ADVISEMENT CENTER.

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