### 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>Doctrinal Foundation</strong></td>
<td></td>
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</tr>
<tr>
<td>Book of Mormon</td>
<td>2</td>
<td>4.0</td>
<td>Rel A 121/H and 122/H</td>
</tr>
<tr>
<td>New Testament</td>
<td>1</td>
<td>2.0</td>
<td>Rel A 211/H or 212/H</td>
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<tr>
<td>Doctrine and Covenants</td>
<td>1</td>
<td>2.0</td>
<td>Rel C 324/H or 325/H</td>
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<tr>
<td><strong>The Individual and Society</strong></td>
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<tr>
<td>American Heritage</td>
<td>1–2</td>
<td>3–6.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Global &amp; 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>
<td>Effective Communication</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>First-Year Writing</td>
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<tr>
<td>Adv Written &amp; Oral Communication</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>
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<tr>
<td>Languages of Learning (Math or Language)</td>
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<td>4.0</td>
<td>Math 112*</td>
</tr>
<tr>
<td><strong>Arts, Letters, and Sciences</strong></td>
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<tr>
<td>Civilization 1 and 2</td>
<td>2</td>
<td>6.0</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>
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<td>3.0</td>
<td>from approved list</td>
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<tr>
<td>Scientific Principles &amp; Reasoning</td>
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<tr>
<td>Biological Science</td>
<td>1–2</td>
<td>3–5.0</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>
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<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></td>
<td>Variable</td>
<td>personal choice</td>
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</tbody>
</table>

**GRADUATION REQUIREMENTS:**

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

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### PROGRAM REQUIREMENTS (55 total hours)

**No more than 3 hours of credit below C- is allowed in major courses.**

**Complete the following preparation core courses:**

| Math 112* Calculus 1 | 4.0 |
| Math 113 Calculus 2 | 4.0 |

**Complete one course from the following:**

- Stat 121 Principles of Statistics | 3.0 |
- Stat 151 Introduction to Bayesian Statistics | 3.0 |
- Stat 201 Statistics for Engineers & Scientists | 3.0 |
- Stat 301 Statistics & Probability for Sec Ed | 3.0 |

**Complete the following statistics core courses:**

- Stat 124 SAS Certification 1 | 1.0 |
- Stat 125 SAS Certification 2 | 1.0 |
- Stat 224 Statistical Computing 1 | 2.0 |
- Stat 230 Analysis of Variance | 3.0 |
- Stat 240 Discrete Probability | 3.0 |
- Stat 290 Communication of Statistical Results | 1.0 |
- Stat 330 Introduction to Regression | 3.0 |
- Stat 340 Inference | 3.0 |

**Complete the following:**

- Math 313 Elementary Linear Algebra | 3.0 |
- Math 314 Calculus of Several Variables | 3.0 |

**Note:** Students who have passed the AP statistics exam or an introductory statistics course should not take Stat 121.

**Complete 21 credit hours from the following, with at least 15 credit hours from the statistics list:**

- Math 334 Ordinary Differential Equations | 3.0 |
- Math 341 Theory of Analysis 1 | 3.0 |
- Math 342 Theory of Analysis 2 | 3.0 |
- Stat 151 Introduction to Bayesian Statistics | 3.0 |
- Stat 234 Methods of Survey Sampling | 3.0 |
- Stat 370 Statistical Theory for Actuaries | 3.0 |
- Stat 424 Statistical Computing 2 | 3.0 |
- Stat 431 Experimental Design | 3.0 |
- Stat 435 Nonparametric Statistical Methods | 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 Applied Time Series and Forecasting | 3.0 |
- Stat 474 Theory of Interest | 3.0 |
- Stat 496R Academic Internship: Statistics | 9.0V |
- Stat 497R Introduction to Statistical Research | 3.0V |
- Stat 538 Survival Analysis | 3.0 |

**Note:** Students may count up to 3 hours of internship credit from Stat 496R toward fulfilling this requirement. Check with an advisor to learn more.

**Recommended Courses:**

Students interested in graduate study in statistics are strongly recommended to choose electives to prepare for the BYU BS/MS statistics integrated program by meeting with the statistics graduate coordinator. Electives that prepare for graduate study in statistics include Math 341, 342.

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*THESE CLASSES FILL BOTH UNIVERSITY CORE AND PROGRAM REQUIREMENTS (4 hours overlap)*

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**FOR UNIVERSITY CORE OR PROGRAM QUESTIONS CONTACT THE ADVISEMENT CENTER**

Physical and Mathematical Sciences College Advisement Center

N-181 ESC

Brigham Young University, Provo, UT 84602

Telephone: (801) 422-2674

**FACULTY ADVISOR:**

Del T. Scott

206 TMCB

Brigham Young University, Provo, UT 84602

Telephone: (801) 422-7054
Suggested Sequence of Courses:

**FRESHMAN YEAR**

1st Semester
- 1st Year Writing or American Heritage 3.0
- Math 112 (FWSpSu) 4.0
- Stat 121 3.0
- GE (Arts) 3.0
- Rel A 121 (FWSpSu) 2.0

**Total Hours 15.0**

2nd Semester
- American Heritage or 1st Year Writing 3.0
- Math 113 (FWSpSu) 4.0
- Stat 230 3.0
- Rel A 122 (FWSpSu) 2.0
- Phy S 100 3.0

**Total Hours 15.0**

**SOPHOMORE YEAR**

3rd Semester
- Math 313 3.0
- Stat 240 3.0
- Global and Cultural Awareness 3.0
- Biological Science 3.0
- Rel A 211/212 2.0

**Total Hours 15.0**

4th Semester
- Math 314 3.0
- Stat 124 (1st block) 1.0
- Stat 125 (2nd block) 1.0
- Stat 224 2.0
- Stat 290 1.0
- Stat 330 3.0
- Letters 3.0
- Rel C 324/325 2.0

**Total Hours 16.0**

Department recommendation: Internship during Spring/Summer

**JUNIOR YEAR**

5th Semester
- Stat 340 3.0
- Statistics elective 3.0
- Adv. Written and Oral Communication 3.0
- Civilization 1 3.0
- Religion Elective 2.0
- General elective 1.0

**Total Hours 15.0**

6th Semester
- Statistics elective 3.0
- Social Science 3.0
- Civilization 2 3.0
- Religion Elective 2.0
- General electives 3.0

**Total Hours 14.0**

Department recommendation: Internship during Spring/Summer

**SENIOR YEAR**

7th Semester
- Statistics elective 3.0
- Statistics elective 3.0
- Statistics elective 3.0
- Religion Elective 2.0
- General electives 4.0

**Total Hours 15.0**

8th Semester
- Statistics elective 3.0
- Statistics elective 3.0
- General electives 9.0

**Total Hours 15.0**

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.

While the Statistical Science emphasis is designed to prepare students for graduate programs, all students in the Statistical Science emphasis leave BYU with a resourceful, disciplined, and flexible approach to statistics, an enhanced capacity to analyze and interpret data, a broadened perspective on the impact of data in decision-making, and a well-developed capacity for understanding and communicating statistical results.

CAREER OPPORTUNITIES:

The increase of big data and analytics across disciplines in 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.

For more information on careers in your major, please refer to From Major to Career, a publication which is located in all college advisement centers.

**ADVISING:**


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, 125, 230, 290, 330) are eligible to receive a certificate jointly issued by SAS and BYU which can be listed on a resume. More information is available at http://statistics.byu.edu/sas-certificate-opportunities.


**Note 1:** 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 2:** 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 3:** Students must have the statistics core completed before their senior year in order to graduate within four years.