Statistics (B.S.)

Required course work includes the university requirements (see regulation J-3 [https://catalog.uidaho.edu/general-requirements-academic-procedures/j-general-requirements-baccalaureate-degrees/]) and:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 170</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 175</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 275</td>
<td>Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>MATH 330</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following options: 39-58

- General (p. 1)
- Actuarial Science and Finance (p. 1)

Total Hours: 53-72

A. General Option

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>STAT 301</td>
<td>Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>STAT 407</td>
<td>Experimental Design</td>
<td>3</td>
</tr>
<tr>
<td>STAT 422</td>
<td>Sample Survey Methods</td>
<td>3</td>
</tr>
<tr>
<td>STAT 431</td>
<td>Statistical Analysis</td>
<td>3</td>
</tr>
<tr>
<td>STAT 436</td>
<td>Applied Regression Modeling</td>
<td>3</td>
</tr>
<tr>
<td>STAT 451</td>
<td>Probability Theory</td>
<td>3</td>
</tr>
<tr>
<td>STAT 452</td>
<td>Mathematical Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Select two of the following: 6

- CS 120 Computer Science I
- STAT 426 SAS Programming
- STAT 427 R Programming

Select 12 credits from the following: 12

- CS 479 Data Science
- MATH 310 Ordinary Differential Equations
- MATH 428 Numerical Methods
- MATH 437 Mathematical Biology
- MATH 438 Mathematical Modeling
- MATH 471 Introduction to Analysis I
- MIS 455 Data Management for Big Data
- STAT 456 Quality Management
- STAT 514 Nonparametric Statistics
- STAT 517 Statistical Learning and Predictive Modeling
- STAT 535 Introduction to Bayesian Statistics

Total Hours: 39

Courses to total 120 credits for this degree

B. Actuarial Science and Finance Option

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 310</td>
<td>Ordinary Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>MATH 451</td>
<td>Probability Theory</td>
<td>3</td>
</tr>
<tr>
<td>MATH 452</td>
<td>Mathematical Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

400-level MATH courses: Three additional courses chosen from MATH course numbered 400 and above. May include STAT 422.

Supporting Courses

- ACCT 201 Introduction to Financial Accounting 3
- ACCT 202 Introduction to Managerial Accounting 3
- CS 112 Computational Thinking and Problem Solving 3-4
- or CS 120 Computer Science I
- FIN 301 Financial Resources Management 3
- STAT 251 Statistical Methods 3
- or STAT 301 Probability and Statistics 3
- STAT 426 SAS Programming 3
- STAT 431 Statistical Analysis 3
- STAT 433 Econometrics 3
- or STAT 436 Applied Regression Modeling

Select one of the following: 4-6

- ECON 201 Principles of Macroeconomics
- & ECON 202 and Principles of Microeconomics
- ECON 272 Foundations of Economic Analysis

Select three courses from the following: 7-9

- ECON 351 Intermediate Macroeconomic Analysis
- ECON 352 Intermediate Microeconomic Analysis
- FIN 302 Intermediate Financial Management
- FIN 381 International Finance
- FIN 408 Security Analysis
- FIN 463 Portfolio Management
- FIN 464 Derivatives and Risk Management
- FIN 465 Introduction to Market Trading
- FIN 469 Risk and Insurance
- MATH 455 Applied Actuarial Science
- or STAT 426 SAS Programming
- or STAT 427 R Programming

Total Hours: 53-58

Courses to total 120 credits for this degree

General Option

1. The student can apply fundamental theory in probability and statistical inference.
2. The student can apply and evaluate statistical models.
3. The student can apply statistical computing skills for data analysis and data science.
4. The student can demonstrate effective communication skills.

Actuarial Science and Finance Option

1. The student can apply statistical computing skills for data analysis and data science.