

# 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:

Code	Title	Hours
MATH 170	Calculus I	4
MATH 175	Calculus II	4
MATH 275	Calculus III	3
MATH 330	Linear Algebra	3
Select one of the following options:		39-58
General (p. 1)		
Actuarial Science and Finance (p. 1)		
<b>Total Hours</b>		<b>53-72</b>

## A. General Option

Code	Title	Hours
STAT 301	Probability and Statistics	3
STAT 407	Experimental Design	3
STAT 422	Survey Sampling Methods	3
STAT 431	Statistical Analysis	3
STAT 436	Applied Regression Modeling	3
STAT 451	Probability Theory	3
STAT 452	Mathematical Statistics	3
Select two of the following:		6
CS 120	Computer Science I	
MATH 183	Introduction to Data Science in Python	
STAT 426	SAS Programming	
STAT 427	R Programming	
Other approved courses		
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	
MATH 483	Foundations of Machine Learning	
MIS 455	Data Management for Big Data	
STAT 414/514	Nonparametric Statistics	
STAT 417/517	Statistical Learning and Predictive Modeling	
STAT 418	Multivariate Analysis	
STAT 433	Econometrics	
STAT 435/535	Introduction to Bayesian Statistics	
STAT 456	Enterprise Quality Management	
<b>Total Hours</b>		<b>39</b>

Courses to total 120 Credits for this degree

## B. Actuarial Science and Finance Option

Code	Title	Hours
<b>Math Courses</b>		
MATH 310	Ordinary Differential Equations	3
MATH 451	Probability Theory	3
MATH 452	Mathematical Statistics	3
400-level MATH courses: Three additional courses chosen from MATH course numbered 400 and above. May include STAT 422.		9
<b>Supporting Courses</b>		
ACCT 201	Introduction to Financial Accounting	3
ACCT 202	Introduction to Managerial Accounting	3
FIN 301	Financial Resources Management	3
STAT 251	Statistical Methods	3
or STAT 301	Probability and Statistics	
STAT 431	Statistical Analysis	3
STAT 433	Econometrics	3
or STAT 436	Applied Regression Modeling	
Select two course from the following:		6
CS 120	Computer Science I	
MATH 183	Introduction to Data Science in Python	
STAT 426	SAS Programming	
STAT 427	R Programming	
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	
MATH 483	Foundations of Machine Learning	
<b>Total Hours</b>		<b>53-57</b>

Courses to total 120 credits for this degree

## General Option

Fall Term 1		Hours
ENGL 101	Writing and Rhetoric I	3
MATH 143	College Algebra	3
Scientific Ways of Knowing Course		4
Oral Communication Course		3
Elective Course		1
		<b>14</b>
Spring Term 1		Hours
ENGL 102	Writing and Rhetoric II	3
MATH 144	Precalculus II: Trigonometry	1
MATH 170	Calculus I	4

## 2 Statistics (B.S.)

Scientific Ways of Knowing Course	4
Humanistic and Artistic Ways of Knowing Course	3
<b>Hours</b>	<b>15</b>
<b>Fall Term 2</b>	
MATH 175 Calculus II	4
Humanistic and Artistic Ways of Knowing Course	3
Social and Behavioral Ways of Knowing Course	3
Elective Course	3
Elective Course	3
<b>Hours</b>	<b>16</b>
<b>Spring Term 2</b>	
MATH 275 Calculus III	3
MATH 330 Linear Algebra	3
STAT 301 Probability and Statistics	3
Social and Behavioral Ways of Knowing Course	3
Elective Course	3
<b>Hours</b>	<b>15</b>
<b>Fall Term 3</b>	
STAT 422 Survey Sampling Methods	3
STAT 431 Statistical Analysis	3
American Diversity Course	3
CS 479 OR MATH 310 OR MATH 428 OR MATH 437 OR MATH 438 OR MATH 471 OR MATH 483 OR MIS 455 OR STAT 414 OR STAT 417 OR STAT 418 OR STAT 433 OR STAT 435 OR STAT 456 OR STAT 514 OR STAT 517 OR STAT 535	3
CS 120 OR MATH 183 OR STAT 426 OR STAT 427	3
<b>Hours</b>	<b>15</b>
<b>Spring Term 3</b>	
STAT 407 Experimental Design	3
STAT 436 Applied Regression Modeling	3
International Course	3
CS 120 OR STAT 426 OR STAT 427	3
CS 479 OR MATH 310 OR MATH 428 OR MATH 437 OR MATH 438 OR MATH 471 OR MATH 483 OR MIS 455 OR STAT 414 OR STAT 417 OR STAT 418 OR STAT 433 OR STAT 435 OR STAT 456 OR STAT 514 OR STAT 517 OR STAT 535	3
<b>Hours</b>	<b>15</b>
<b>Fall Term 4</b>	
STAT 451 Probability Theory	3
Elective Course	3
Elective Course	3
Elective Course	3
CS 479 OR MATH 310 OR MATH 428 OR MATH 437 OR MATH 438 OR MATH 471 OR MATH 483 OR MIS 455 OR STAT 414 OR STAT 417 OR STAT 418 OR STAT 433 OR STAT 435 OR STAT 456 OR STAT 514 OR STAT 517 OR STAT 535	3
<b>Hours</b>	<b>15</b>
<b>Spring Term 4</b>	
STAT 452 Mathematical Statistics	3
MATH 415 Cryptography	3
Elective Course	3
Elective Course	3
CS 479 OR MATH 310 OR MATH 428 OR MATH 437 OR MATH 438 OR MATH 471 OR MATH 483 OR MIS 455 OR STAT 414 OR STAT 417 OR STAT 418 OR STAT 433 OR STAT 435 OR STAT 456 OR STAT 514 OR STAT 517 OR STAT 535	3
<b>Hours</b>	<b>15</b>
<b>Total Hours</b>	<b>120</b>

## Actuarial Science and Finance Option

Fall Term 1	Hours
ENGL 101 Writing and Rhetoric I	3
MATH 143 College Algebra	3
Scientific Ways of Knowing Course	4
Oral Communication Course	3
Elective Course	2
<b>Hours</b>	<b>15</b>

<b>Spring Term 1</b>	
ENGL 102 Writing and Rhetoric II	3
MATH 144 Precalculus II: Trigonometry	1
MATH 170 Calculus I	4
Scientific Ways of Knowing Course	4
(ECON 201 AND ECON 202)	3
<b>Hours</b>	<b>15</b>
<b>Fall Term 2</b>	
ACCT 201 Introduction to Financial Accounting	3
MATH 175 Calculus II	4
Social and Behavioral Ways of Knowing Course	3
Humanistic and Artistic Ways of Knowing Course	3
Elective Course	3
<b>Hours</b>	<b>16</b>
<b>Spring Term 2</b>	
ACCT 202 Introduction to Managerial Accounting	3
MATH 275 Calculus III	3
Humanistic and Artistic Ways of Knowing Course	3
STAT 251 OR STAT 301	3
(ECON 201 AND ECON 202)	3
<b>Hours</b>	<b>15</b>
<b>Fall Term 3</b>	
FIN 301 Financial Resources Management	3
MATH 310 Ordinary Differential Equations	3
MATH 330 Linear Algebra	3
American Diversity Course	3
Elective Course	3
<b>Hours</b>	<b>15</b>
<b>Spring Term 3</b>	
STAT 426 SAS Programming	3
or STAT 427 or R Programming	
or MATH 183 or Introduction to Data Science in Python	
or CS 120 or Computer Science I	
400 level Mathematics, Major Elective Course	3
International Course	3
Elective Course	3
ECON 351 OR ECON 352 OR FIN 302 OR FIN 381 OR FIN 408 OR FIN 463 OR FIN 464 OR FIN 465 OR FIN 469 OR MATH 455 OR MATH 483	3
<b>Hours</b>	<b>15</b>
<b>Fall Term 4</b>	
MATH 451 Probability Theory	3
STAT 431 Statistical Analysis	3
400 level Mathematics, Major Elective Course	3
Elective Course	3
ECON 351 OR ECON 352 OR FIN 302 OR FIN 381 OR FIN 408 OR FIN 463 OR FIN 464 OR FIN 465 OR FIN 469 OR MATH 455 OR MATH 483	3
<b>Hours</b>	<b>15</b>
<b>Spring Term 4</b>	
MATH 452 Mathematical Statistics	3
400 level Mathematics, Major Elective Course	3
ECON 351 OR ECON 352 OR FIN 302 OR FIN 381 OR FIN 408 OR FIN 463 OR FIN 464 OR FIN 465 OR FIN 469 OR MATH 455 OR MATH 483	3
STAT 433 OR STAT 436	3
Elective Course	2
<b>Hours</b>	<b>14</b>
<b>Total Hours</b>	<b>120</b>

The degree map is a guide for the timely completion of your curricular requirements. Your academic advisor or department may be contacted for assistance in interpreting this map. This map is not reflective of your academic history or transcript and it is not official notification of completion of degree or certificate requirements. Please contact the

Registrar's Office regarding your official degree/certificate completion status.

### **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.