



BS in STATISTICS: Statistical Science Emphasis (695220) MAP Sheet

Department of Statistics

For students entering the degree program during the 2007–2008 curricular year.

UNIVERSITY CORE AND GRADUATION REQUIREMENTS				MAJOR REQUIREMENTS (57.0 total hours)		
UNIVERSITY CORE REQUIREMENTS (48.5 hours minimum)				No more than 3 hours of D credit is allowed in major courses.		
<u>Requirements</u>	<u>#Classes</u>	<u>Hours</u>	<u>Classes</u>	Complete the following preparation core courses:		
Doctrinal Foundation				Math 112* Calculus 1	4.0	
Book of Mormon	2	4.0	Rel A 121/H and 122/H	Math 113 Calculus 2	4.0	
New Testament	1	2.0	Rel A 211/H or 212/H	Complete one course from the following:		
Doctrine and Covenants	1	2.0	Rel C 324/H or 325/H	Stat 221 Principles of Statistics	3.0	
The Individual and Society				Stat 321 Elements of Mathematical Statistics	3.0	
Wellness	1 or 3	1.5–2.0	from approved list	Stat 331 Introduction to Bayesian Statistics	3.0	
Citizenship				Stat 332 Quality Improvement for Industry	3.0	
American Heritage	1–2	3–6.0	from approved list	Note: Students who have passed the AP statistics exam or an introductory statistics course should not take Stat 221.		
Global & Cultural Awareness	1	3.0	from approved list	Complete the following statistics core courses:		
Skills				Stat 291 Teaching Elementary Stat in Lab Setting 1	0.5	
Effective Communication				Stat 292 Teaching Elementary Stat in Lab Setting 2	0.5	
First-Year Writing	1	3.0	from approved list	Stat 336 Statistical Methods 1	6.0	
Adv Written & Oral Communication	1	3.0	from approved list	Stat 337 Statistical Methods 2	3.0	
Quantitative Reasoning	1	4.0	Math 112*			
Languages of Learning (Math or Language)	1	4.0	Math 112*			
Arts, Letters, and Sciences						
Civilization 1 and 2	2	6.0	from approved list			
Arts	1	3.0	from approved list			
Letters	1	3.0	from approved list			
Scientific Principles & Reasoning						
Biological Science	1–2	3–6.0	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			
GRADUATION REQUIREMENTS:						
Minimum residence hours required		30.0				
Minimum hours needed to graduate		120.0				
				Emphasis Requirements: Complete the following: Math 214 Calculus of Several Variables 3.0 Math 343 Elementary Linear Algebra 3.0 Stat 441 Statistical Theory 1 3.0 Stat 442 Statistical Theory 2 3.0 Complete 24 credit hours from the following, with at least 15 credit hours from the statistics list: C S 142 Introduction to Computer Programming 3.0 Math 315 Theory of Analysis 3.0 Math 316 Theory of Analysis 3.0 Math 334 Ordinary Differential Equations 3.0 Math 480 Mathematical Models 3.0 Stat 224 Statistical Computing 1 3.0 Stat 331 Introduction to Bayesian Statistics 3.0 Stat 334 Methods of Survey Sampling 3.0 Stat 424 Statistical Computing 2 3.0 Stat 431 Experimental Design 3.0 Stat 434 Advanced Sampling 3.0 Stat 435 Nonparametric Statistical Methods 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 496R Academic Internship: Statistics 9.0V Stat 497R Introduction to Statistical Research 3.0V Stat 535 Applied Linear Models 3.0 Stat 536 Modern Regression Methods 3.0 Stat 538 Survival Analysis 3.0 Stat 545 Stochastic Processes 3.0 Recommended Courses: It is recommended that students take Stat 224, 424, 431, 435, 469. Students planning graduate studies should also take Math 315 and 316. (See the Mathematics section of this catalog for prerequisites.)		

***THESE CLASSES FILL BOTH UNIVERSITY CORE AND MAJOR REQUIREMENTS (4.0 hours overlap)**

FOR GE OR MAJOR QUESTIONS CONTACT THE ADVISEMENT CENTER
 Physical and Mathematical Sciences College Advisement Center
 N-179 ESC
 Brigham Young University, Provo, UT 84602
 Telephone: (801) 422-6270

FACULTY ADVISORS:

William F. Christensen
 219 TMCB
 Brigham Young University, Provo, UT 84602
 Telephone: (801) 422-7057

Bruce Jay Collings
 230B TMCB
 Brigham Young University, Provo, UT 84602
 Telephone: (801) 422-4870

BS in STATISTICS: Statistical Science Emphasis (695220)
2007–2008

Suggested Sequence of Courses:

FRESHMAN YEAR

1st Semester

1 st Year Writing	3.0
Or A Htg 100	(3.0)
Math 112 (FWSpSu)	4.0
Rel A 121 (FWSpSu)	2.0
General Education courses, university requirements, and/or general electives	6.0
Total Hours	15.0

2nd Semester

A Htg 100	3.0
or 1 st Year Writing	(3.0)
Math 113 (FWSpSu)	4.0
Stat 221 (FWSpSu)	3.0
or Stat 321 (FSu)	(3.0)
or Stat 331 (W)	(3.0)
or Stat 332 (FWSp)	(3.0)
Rel A 122 (FWSpSu)	2.0
General Education courses, university requirements, and/or general electives	3.0
Total Hours	15.0

SOPHOMORE YEAR

3rd Semester

Math 343 (FWSpSu)	3.0
Stat 224 (FW) recommended	3.0
Stat 291 (FWSpSu)	0.5
Stat 336 (FW)	6.0
General Education courses, university requirements, and/or general electives	2.5
Total Hours	15.0

4th Semester

Engl 316 (FWSpSu)	3.0
or MCom 320	(3.0)
Math 214 (FWSpSu)	3.0
Stat 292 (FWSp)	0.5
Stat 337 (FW)	3.0
General Education courses, university requirements, and/or general electives	5.5
Total Hours	15.0

Note: 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.

JUNIOR YEAR

5th Semester

Stat 424 recommended	3.0
Stat 441 (FW)	3.0
Statistics electives, General Education courses, university requirements, and/or general electives	9.0
Total Hours	15.0

6th Semester

Stat 431 (F) recommended	3.0
Stat 442 (FW)	3.0
Statistics electives, General Education courses, university requirements, and/or general electives	9.0
Total Hours	15.0

SENIOR YEAR

7th Semester

Stat 435 (F) recommended	3.0
Statistics electives, General Education courses, university requirements, and/or general electives	12.0
Total Hours	15.0

8th Semester

Stat 469 (W) recommended	3.0
Statistics electives, General Education courses, university requirements, and/or general electives	12.0
Total Hours	15.0

THE DISCIPLINE:

The Statistician's job is to help determine what data are to be collected, how to collect it to avoid biases and distortions, and then how to turn that data into information that other people can understand to help solve problems and reach sound decisions. From the predictions of the political pollster to exacting analyses of pharmaceutical research, the breadth and diversity of statistical applications are injected into nearly all aspects of modern life.

CAREER OPPORTUNITIES:

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. The technical tools statisticians acquire are useful in many areas, and for this reason a statistics degree is also excellent preparation for professional programs in law, business administration, public administration, medicine, and actuarial science.

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.

Department of Statistics
230 TMCB
Brigham Young University, Provo, UT 84602
Telephone: (801) 422-4505