



BS in ACTUARIAL SCIENCE (695224) MAP Sheet

Department of Statistics

For students entering the degree program during the 2009–2010 curricular year.

UNIVERSITY CORE AND GRADUATION REQUIREMENTS				PROGRAM REQUIREMENTS (57.0 total hours)	
UNIVERSITY CORE REQUIREMENTS				No more than three 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	Econ 110* and one course	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*	Program Requirements:	
Languages of Learning (Math or Language)	1	4.0	Math 112*	Complete the following:	
Arts, Letters, and Sciences				Econ 110* Economic Principles and Problems	3.0
Civilization 1 and 2	2	6.0	from approved list	Math 313 Elementary Linear Algebra	3.0
Arts	1	3.0	from approved list	Math 314 Calculus of Several Variables	3.0
Letters	1	3.0	from approved list	Stat 470 Statistical Theory for Actuaries	3.0
Scientific Principles & Reasoning				Stat 474 Theory of Interest	3.0
Biological Science	1–2	3–6.0	from approved list	Stat 475 Life Contingencies	3.0
Physical Science	1–2	3–7.0	from approved list	Recommended Courses:	
Social Science	1	3.0	Econ 110*	It is recommended that students take Acc 200, Bus M 300, Econ 380, 381, and either Stat 469, Econ 388, or Econ 588.	
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			

*THESE CLASSES FILL BOTH UNIVERSITY CORE AND PROGRAM REQUIREMENTS (7.0 hours overlap)

FOR UNIVERSITY CORE OR PROGRAM 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

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BS in ACTUARIAL SCIENCE (695224)
2009–2010

Suggested Sequence of Courses:

FRESHMAN YEAR

1st Semester

Econ 110 (FWSpSu)	3.0
1 st Year Writing	3.0
Math 112* (FWSpSu)	4.0
Rel A 121 (FWSpSu)	2.0
Bio 100 (Biol Sci)	3.0
Total Hours	15.0

2nd Semester

A Htg 100	3.0
or Plsc 110	(3.0)
or Hist 220	(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
Phy S 100 (Phys Sci)	3.0
Total Hours	15.0

SOPHOMORE YEAR

3rd Semester

Math 313 (FWSpSu)	3.0
Stat 291 (FWSpSu)	0.5
Stat 336 (FW)	6.0
Rel A 211/212	2.0
Civilization 1	3.0
Electives	0.5
Total Hours	15.0

4th Semester

Math 314 (FWSpSu)	3.0
Stat 292 (FWSp)	0.5
Stat 337 (FW)	3.0
Rel C 324/325	2.0
Civilization 2	3.0
Electives	3.5
Total Hours	15.0

JUNIOR YEAR

5th Semester

Stat 470 (F)	3.0
Statistics/Actuarial Science Elective	3.0
Religion Elective	2.0
Arts	3.0
Electives	4.0
Total Hours	15.0

6th Semester

Engl 316 (FWSpSu)	3.0
or MCom 320 (Adv Writing)	(3.0)
Stat 474 (W)	3.0
SOA Exam P	0.0
Religion Elective	2.0
HEPE 129 (Wellness)	2.0
Electives	5.0
Total Hours	15.0

SENIOR YEAR

7th Semester

Stat 475 (F)	3.0
SOA Exam P	0.0
Statistics/Actuarial Science Elective	3.0
Statistics/Actuarial Science Elective	3.0
Religion Elective	2.0
Global & Cultural Awareness	3.0
Electives	1.0
Total Hours	15.0

8th Semester

Statistics/Actuarial Science Elective	3.0
Statistics/Actuarial Science Elective	3.0
Statistics/Actuarial Science Elective	3.0
Letters	3.0
Electives	3.0
Total Hours	15.0

THE DISCIPLINE:

An actuary is a business professional who analyzes the financial consequences of risk. Actuaries use statistics, mathematics, and financial theory to study uncertain future events, especially those of concern to insurance and pension programs. They evaluate the likelihood of those events, design creative ways to reduce the likelihood, and decrease the impact of adverse events that actually do occur. Their work requires a combination of strong analytical skills, business knowledge, and understanding of human behavior to design and manage programs that control risk.

CAREER OPPORTUNITIES:

Most actuaries work either for an insurance company or for a consulting firm. Actuaries working in the insurance industry may be involved in various aspects of product development, pricing, investing, reserves or reinsurance among other possible responsibilities. Actuaries working in the consulting industry are generally involved with assessment and development of benefit programs offered by the consulting firm's clients, generally large corporations. The actuarial science program is designed to prepare students to enter this challenging field.

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.

ACTUARIAL EXAMS:

Actuaries are required to demonstrate their proficiency by passing a series of competency exams offered by one or more of the principal actuarial societies. Virtually all entry level actuarial employees are required to have passed at least one of these exams as a condition for employment. The BYU Actuarial Science degree provides students with the opportunity to study significant portions of the material covered in the first four exams offered jointly by the Society of Actuaries and the Casualty Actuarial Society (the two major actuarial societies in the United States). These exams are offered on the BYU campus. The correspondence between the actuarial exams and available BYU course work is roughly as follows:

Exam P: Math 112, 113, 314; Stat 470
(full coverage)

Exam FM: Stat 474 (about 80% coverage)

Exam M: Stat 475
(about 75-80% coverage)

Exam C: Stat 336, 337, 469 (or Econ388 or 588)
(about 85% coverage)

In addition to the exams the societies accept the following sets of courses for the VEE (Validation by Educational Experience):

Applied Stat VEE: Stat 336
Business VEE: BusM 300 (has Acc 200 prerequisite)
Economics VEE: Econ 380, Econ 381

Note: 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.

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