



BS in MATHEMATICS (694420) MAP Sheet

Department of Mathematics

For students entering the degree program during the 2016–2017 curricular year.

UNIVERSITY CORE AND GRADUATION REQUIREMENTS				PROGRAM REQUIREMENTS (54 total hours)	
UNIVERSITY CORE REQUIREMENTS				Grades of C– or below will not be acceptable in major courses.	
<u>Requirements</u>	<u>#Classes</u>	<u>Hours</u>	<u>Classes</u>	Complete the following core requirements:	Recommended Courses
Religion Cornerstones				Math 112* Calculus 1	Econ 110 Economic Principles and Problems 3.0
Teachings and Doctrine, Book of Mormon	1	2.0	Rel A 275	Math 113* Calculus 2	Phscs 121 Introduction to Newtonian Mechanics 3.0
Jesus Christ & the Everlasting Gospel	1	2.0	Rel A 250	Math 191 Seminar in Mathematics 1	Phscs 220 Introduction to Electricity & Magnetism 3.0
Foundations of the Restoration	1	2.0	Rel C 225	Math 290 Fundamentals of Mathematics	
The Eternal Family	1	2.0	Rel C 200	Math 313 Elementary Linear Algebra	Note 1: The courses recommended above can be used to fill General Education requirements.
The Individual and Society				Math 314 Calculus of Several Variables	Note 2: Students who continue toward graduate work should complete Math 372 or 473, as well as, Math 541 and Math 553.
Citizenship				Math 334 Ordinary Differential Equations	Note 3: Students who do not plan to pursue a Ph.D. in mathematics are strongly encouraged to complete C S 235.
American Heritage	1–2	3–6.0	from approved list	Math 341 Theory of Analysis 1	
Global & Cultural Awareness	1	3.0	from approved list	Math 342 Theory of Analysis 2	
Skills				Math 352 Introduction to Complex Analysis	
Effective Communication				Math 371 Abstract Algebra 1	
First-Year Writing	1	3.0	from approved list	C S 142 Introduction to Computer Programming	
Adv Written & Oral Communication	1	3.0	from approved list	Complete the following:	
Quantitative Reasoning	1	4.0	Math 112* or 113*	C S 142 Introduction to Computer Programming	
Languages of Learning (Math or Language)	1	4.0	Math 112* or 113*	Complete one of the following:	
Arts, Letters, and Sciences				Stat 151 Introduction to Bayesian Statistics	
Civilization 1 and 2	2	6.0	from approved list	Stat 201 Statistics for Engineers and Scientists	
Arts	1	3.0	from approved list	Stat 370 Statistical Theory for Actuaries	
Letters	1	3.0	from approved list	Complete fifteen hours from the following:	
Scientific Principles & Reasoning				C S 235 Data Structures and Algorithms	
Biological Science	1	3.0	from approved list	Math 300 History and Philosophy of Mathematics	
Physical Science	1–2	3–7.0	from approved list	Math 355 Graph Theory	
Social Science	1	3.0	from approved list	Math 362 Survey of Geometry	
Core Enrichment: Electives				Math 372 Abstract Algebra 2	
Religion Electives	3–4	6.0	from approved list	Any 400- or 500-level mathematics courses (except Math 500)	
Open Electives	Variable	Variable	personal choice		
GRADUATION REQUIREMENTS:				Students are required to take either the GRE Mathematics Subject Test or the Mathematics Major Field Test the last semester before they graduate. The tests are ETS (Educational Testing Service) standardized assessment tests of undergraduate mathematics. Go to ETS Math Subject Test (http://www.ets.org/gre/subject/about/content/mathematics) or ETS Major Field Tests (http://www.ets.org/mft/about/content/mathematics) for a test description and sample problems. These tests do not appear on the transcript or affect the GPA.	
Minimum residence hours required		30.0		Students must participate in an exit interview before graduation.	
Minimum hours needed to graduate		120.0			

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

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

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BS in MATHEMATICS (694420) 2016–2017

Suggested Sequence of Courses:

FRESHMAN YEAR

1st Semester

1 st Year Writing or A Htg 100	3.0 (3.0)
Math 112 (FWSpSu)	4.0
Math 191 (F)	0.5
Math 290 (FWSu)	3.0
Biological Science	3.0
Religion Cornerstone course	2.0
Total Hours	15.5

2nd Semester

A Htg 100 or 1 st Year Writing	3.0 (3.0)
C S 142 (FWSpSu)	3.0
Math 113 (FWSpSu)	4.0
Math 313 (FWSpSu)	3.0
Religion Cornerstone course	2.0
Total Hours	15.0

SOPHOMORE YEAR

3rd Semester

Math 314 (FWSpSu)	3.0
Stat 151 or 201 or 370	3.0
Econ 110 (Social Science)	3.0
Religion Cornerstone course	2.0
General Elective	4.0
Total Hours	15.0

4th Semester

Math 341 (FW)	3.0
Math 371 (FWSp)	3.0
Letters	3.0
Phy S 100 (Physical Science)	3.0
Religion Cornerstone course	2.0
General elective	0.5
Total Hours	14.5

JUNIOR YEAR

5th Semester

Math 342 (FW)	3.0
Approved Math elective	3.0
Advanced Written & Oral Communication	3.0
Civilization 1	3.0
Religion Elective	2.0
General Elective	1.0
Total Hours	15.0

6th Semester

Math 352 (FW)	3.0
Math 334 (FWSpSu)	3.0
Civilization 2	3.0
Religion Elective	2.0
General Elective	4.0
Total Hours	15.0

SENIOR YEAR

7th Semester

Approved Math elective	3.0
Math elective	3.0
Global & Cultural Awareness	3.0
Religion Elective	2.0
General Elective	4.0
Total Hours	15.0

8th Semester

Approved Math elective	3.0
Math elective	3.0
Arts	3.0
General Elective	6.0
Total Hours	15.0

THE DISCIPLINE:

Mathematics is a means of dealing with order, pattern, and number as seen in the world around us. The abilities to compute, to think logically, and to take a reasoned approach to solving problems are highly valued in society and are characteristics of any educated person. Mathematics is not just a body of knowledge, but a process of analysis, reasoning, comparison, deduction, generalization, and problem solving.

A mathematician's stock in trade is the ability to solve problems and to explain the solutions to others. Having once determined what the right questions are, solving problems involves analyzing both concrete and abstract situations, relating them to mathematical ideas and using mathematical techniques to work toward solutions. Explaining the solution involves pointing out what has been solved and why the solution is valid.

CAREER OPPORTUNITIES:

Majors in mathematics (BS) prepare for a wide variety of careers. Some enter graduate school or professional schools and prepare for careers in such fields as college teaching, consulting, research and development, law, medicine, and business administration. Others take positions in government agencies, industrial laboratories, information management firms, or business organizations. All of them spend much time communicating with colleagues about the problems they are solving as they continue to learn more mathematics and share mathematical ideas with others.

INTERNSHIP COORDINATOR:

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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.

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