

MATHEMATICS
Bachelor of Arts (B.A.)
2015-2016

Requirements for Major: At least 37 credit hours in the department, including:

MA 151 Calculus and Analytic Geometry I
MA 152 Calculus and Analytic Geometry II
MA 253 Calculus and Analytic Geometry III
MA 207 Discrete Mathematics
MA 301 Linear Algebra
MA 343 Applied Statistics
MA 344 Mathematical Statistics I
MA 354 Abstract Algebra
MA 371 Introduction to Real Analysis I
MA 372 Introduction to Real Analysis II
MA 387 Capstone Experience
MA 388 Capstone Research

The following Humanities correlated course:

PH 220 Symbolic Logic (General Education Course)
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One of the following correlated sequences:

PS 261 College Physics I (General Education course) & PS 262 College Physics II
PS 281 General Physics I (General Education course) & PS 282 General Physics II
EC 200 Principles of Microeconomics (General Education course), EC 201 Principles of Macroeconomics (General Education course), BU 342 Organization & Management, & BU 347 Production & Operations Management
EC 200 Principles of Microeconomics (General Education course), EC 201 Principles of Macroeconomics (General Education course), AC 224 Financial Accounting, AC 225 Managerial Accounting, & BU 381 Business Finance
A specially designed sequence approved by the Mathematics' Department Chair

General Education Distribution Requirements (BA):

Humanities (15) (GEHU/GECPA) (Max 6 hours/ discipline)	Course Number	Social Sciences (15) (GESS) (Max 6 hours/ discipline)	Course Number	Natural Sciences/ Mathematics (12) (GENS) (Max 8 Hours or 2 Courses/Discipline)	Course Number
Fine Arts (3)		Soc. Science 1 (3)		Nat. Science 1 (3-5)	
Humanities 2 (3)		Soc. Science 2 (3)		Nat. Science 2 (3-5)	
Humanities 3 (3)		Soc. Science 3 (3)		Nat. Science 3 (3-5)	
Humanities 4 (3)		Soc. Science 4 (3)		Nat. Science 4 (3-5)	
Humanities 5 (3)		Soc. Science 5 (3)			

Core University/BA-Specific Requirements:

WU 101 (3)* C or Better		Total Hours (124)	
EN 101 (3) C or Better		Hours Outside Major (84)	
EN 300 (3) C or Better		Upper Division (300 and above) (45)	
MA 112 or MA 116 (3)** C or Better		Hours Within Arts and Sciences (99)	
>= 2.0 Overall Cumulative GPA		>= C Grade All Major and Correlated Courses	
FL 102 (4)			

**Students transferring with 24 or more credit hours completed at an accredited post-secondary institution (after graduating from High School) with a GPA of 2.0 or higher are exempt from this requirement*

***May be waived if the student successfully places into a higher-level mathematics course with an ACT score of 25 or higher and then successfully completes that course with a grade of C or higher or if a student presents an ACT score in mathematics of at least 28 (SAT of at least 640).*

MATHEMATICS SECONDARY EDUCATION SPECIALIZATION

Students seeking certification to teach mathematics must also be formally admitted to the University’s Professional Teacher Education Program

MA 151 Calculus and Analytic Geometry I
MA 152 Calculus and Analytic Geometry II
MA 253 Calculus and Analytic Geometry III
MA 207 Discrete Mathematics
MA 301 Linear Algebra
MA 343 Applied Statistics
MA 354 Abstract Algebra
MA 367 Modern Geometry
MA 371 Introduction to Real Analysis I
MA 381 History & Literature of Mathematics <u>or</u> PH 325 Philosophy of Mathematics
MA 387 Capstone Experience
MA 388 Capstone Research

The following Humanities correlated course:

PH 220 Symbolic Logic (General Education course)
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General Education Distribution Requirements (BA):

Humanities (15) (GEHU/GECPA) (Max 6 hours/ discipline)	Course Number	Social Sciences (15) (GESS) (Max 6 hours/ discipline)	Course Number	Natural Sciences/ Mathematics (12) (GENS) (Max 8 Hours or 2 Courses/Discipline)	Course Number
Fine Arts (3)		Soc. Science 1 (3)		Nat. Science 1 (3-5)	
PH 220 (3)		Soc. Science 2 (3)		Nat. Science 2 (3-5)	
Humanities 3 (3)		Soc. Science 3 (3)		Nat. Science 3 (3-5)	
Humanities 4 (3)		Soc. Science 4 (3)		Nat. Science 4 (3-5)	
Humanities 5 (3)		Soc. Science 5 (3)			

Core University/BA-Specific Requirements:

WU 101 (3)* C or Better		Total Hours (124)	
EN 101 (3) C or Better		Hours Outside Major (84)	
EN 300 (3) C or Better		Upper Division (300 and above) (45)	
MA 112 or MA 116 (3)** C or Better		Hours Within Arts and Sciences (99)	
>= 2.0 Overall Cumulative GPA		>= 2.0 Major Cumulative GPA	
FL 102 (4)			

**Students transferring with 24 or more credit hours completed at an accredited post-secondary institution (after graduating from High School) with a GPA of 2.0 or higher are exempt from this requirement*

***May be waived if the student successfully places into a higher-level mathematics course with an ACT score of 25 or higher and then successfully completes that course with a grade of C or higher or if a student presents an ACT score in mathematics of at least 28 (SAT of at least 640).*

ACTUARIAL SCIENCE SPECIALIZATION

MA 151 Calculus and Analytic Geometry I
MA 152 Calculus and Analytic Geometry II
MA 253 Calculus and Analytic Geometry III
MA 250 Theory of Interest
MA 301 Linear Algebra
MA 343 Applied Statistics
MA 344 Mathematical Statistics I
MA 345 Mathematical Statistics I
MA 346 Regression Analysis
MA 347 Stochastic Processes
MA 348 Time Series Analysis
MA 385 Actuarial Mathematics

Correlated courses:

AC 224 Financial Accounting
AC 225 Managerial Accounting
BU 374 Principles of Risk & Insurance
BU 381 Business Finance
BU 483 Investments
EC 200 Principles of Microeconomics (General Education course)
EC 201 Principles of Macroeconomics (General Education course)

General Education Distribution Requirements (BA):

Humanities (15) (GEHU/GECPA) (Max 6 hours/ discipline)	Course Number	Social Sciences (15) (GESS) (Max 6 hours/ discipline)	Course Number	Natural Sciences/ Mathematics (12) (GENS) (Max 8 Hours or 2 Courses/Discipline)	Course Number
Fine Arts (3)		EC 200 (3)		Nat. Science 1 (3-5)	
Humanities 2 (3)		EC 201 (3)		Nat. Science 2 (3-5)	
Humanities 3 (3)		Soc. Science 3 (3)		Nat. Science 3 (3-5)	
Humanities 4 (3)		Soc. Science 4 (3)		Nat. Science 4 (3-5)	
Humanities 5 (3)		Soc. Science 5 (3)			

Core University/BA-Specific Requirements:

WU 101 (3)* C or Better		Total Hours (124)	
EN 101 (3) C or Better		Hours Outside Major (84)	
EN 300 (3) C or Better		Upper Division (300 and above) (45)	
MA 112 or MA 116 (3)** C or Better		Hours Within Arts and Sciences (99)	
>= 2.0 Overall Cumulative GPA		>= 2.0 Major Cumulative GPA	
FL 102 (4)			

**Students transferring with 24 or more credit hours completed at an accredited post-secondary institution (after graduating from High School) with a GPA of 2.0 or higher are exempt from this requirement*

***May be waived if the student successfully places into a higher-level mathematics course with an ACT score of 25 or higher and then successfully completes that course with a grade of C or higher or if a student presents an ACT score in mathematics of at least 28 (SAT of at least 640).*

Sample 4-Year Schedule for Mathematics – Pure Mathematics Major

Bachelor of Arts

124-126 Hours

Curriculum for students starting 2015-2016 Academic Year
Students starting in different academic years should contact their advisor.

For students entering in an EVEN Year:

Freshman			
Fall Semester		Spring Semester	
MA 151 – Calculus I	5	MA 152 – Calculus II	5
WU 101 – Washburn Experience	3	EN 101 – Freshman Composition	3
PH 220 – Logic	3	AR/MU/TH General Education	3
Natural Science General Education	3	Soc. Sci. General Education	3
MA 140 - Statistics	3	Natural Science General Education	3
TOTAL	17	TOTAL	17
Sophomore			
Fall Semester		Spring Semester	
MA 253 – Calculus III	3	MA 207 – Discrete Mathematics	3
*EC 200 – Microeconomics	3	MA 301 – Linear Algebra	3
Humanities General Education	3	*EC 201 – Macroeconomics	3
Natural Science General Education	3	Humanities General Education	3
FL 101 – Foreign Language I	4	FL 102 – Foreign Language II	4
TOTAL	16	TOTAL	16
Junior			
Fall Semester		Spring Semester	
MA 371 – Intro to Real Analysis I	3	MA 343 – Applied Statistics	3
*AC 224 – Financial Accounting	3	MA 372 – Intro to Real Analysis II	3
EN 300 – Advanced Composition	3	*AC 225 – Managerial Accounting	3
Humanities General Education	3	*BU 381 – Business Finance	3
Upper Division Elective	3	Soc. Sci. General Education	3
TOTAL	15	TOTAL	15
Senior			
Fall Semester		Spring Semester	
MA 344 – Mathematics Statistics	3	Soc. Sci. General Education	3
MA 354 – Abstract Algebra	3	Upper Division Elective	3
MA 387 – Capstone Experience	2	Upper Division Elective	3
MA 388 – Capstone Research	1	Upper Division Elective	3
Natural Science General Education	3	Upper Division Elective	3
Upper Division Elective	3		
TOTAL	15	TOTAL	15

*Correlated course electives may vary (10-15 hours). Check catalog options.

Sample 4-Year Schedule for Mathematics – Pure Mathematics Major

Bachelor of Arts

124-126 Hours

Curriculum for students starting 2015-2016 Academic Year
Students starting in different academic years should contact their advisor.

For students entering in an ODD Year:

Freshman			
Fall Semester			Spring Semester
MA 151 – Calculus I	5	MA 152 – Calculus II	5
WU 101 – Washburn Experience	3	EN 101 – Freshman Composition	3
PH 220 – Logic (1)	3	Soc. Sci. General Education (1)	3
Natural Science General Education (1)	3	AR/MU/TH General Education (2)	3
MA 140 - Statistics	3	Natural Science General Education (2)	3
TOTAL	17	TOTAL	17
Sophomore			
Fall Semester			Spring Semester
MA 253 – Calculus III	3	MA 301 – Linear Algebra	3
*EC 200 – Microeconomics (2)	3	MA 207 – Discrete Mathematics	3
Humanities General Education (3)	3	*EC 201 – Macroeconomics (3)	3
Natural Science General Education (3)	3	Humanities General Education (4)	3
FL 101 – Foreign Language I	4	FL 102 – Foreign Language II	4
TOTAL	16		16
Junior			
Fall Semester			Spring Semester
MA 354 – Abstract Algebra	3	MA 343 – Applied Statistics	3
*AC224 – Financial Accounting	3	*AC 225 – Managerial Accounting	3
EN 300 – Advanced Composition	3	*BU 381 – Business Finance	3
Natural Science General Education (4)	3	Humanities General Education (5)	3
Upper Division Elective	3	Soc. Sci. General Education (4)	3
TOTAL	15	TOTAL	15
Senior			
Fall Semester			Spring Semester
MA 344 – Mathematics Statistics I	3	MA 372 – Intro to Real Analysis II	3
MA 371 – Intro to Real Analysis I	3	Upper Division Elective	3
MA 387 – Capstone Experience	2	Upper Division Elective	3
MA 388 – Capstone Research	1	Upper Division Elective	3
Soc. Sci. General Education (5)	3	Upper Division Elective	3
Upper Division Elective	3		
TOTAL	15		15

*Correlated course electives may vary (10-15 hours). Check catalog options.