

# MILLERSVILLE UNIVERSITY

Student Name: \_\_\_\_\_ Student I.D. # \_\_\_\_\_

DEGREE: BA	<b>MAJOR REQUIREMENTS FOR A BA DEGREE IN MATHEMATICS: ACTUARIAL SCIENCE</b> Total credit hours required: 120.0 minimum
MAJOR: MATH	
OPTION: ACTU	

## REQUIREMENTS AND POLICIES FOR THE BA MATHEMATICS MAJOR

### A. Policies for Admission to the Major

1. New students (freshmen and transfers) must be admitted to the Mathematics major by the Office of Admissions upon admission to the University.
2. Admission into the Mathematics major from other departments is upon approval of the chairperson of the Department of Mathematics. A "C-" or better in MATH 161 and all Math courses already taken which count toward a Mathematics major is required for admission.
3. Non-degree and continuing education students must be admitted to the Mathematics major by the Office of Admissions, subject to approval by the chairperson of the Department of Mathematics.

### B. Policies for Retention in the Major

1. University requirements for retention.
2. A mathematics major taking any Math course required as a prerequisite for a later Math course must earn a grade of "C-" or better in that course before being admitted to the later course for which it is a prerequisite.
3. Periodically, a mathematics major's progress will be reviewed in accordance with the "Department Evaluation of Majors" policy stated in the University catalog. A student who does not demonstrate satisfactory progress will be notified of the department's concern. Subsequent notifications may result in being terminated as a major in the department.

### C. Policies for Completion of the Major

1. Completion of all University curricular requirements.

**Note to the student:** *This form is provided as a guide. It is your responsibility to consult regularly with your advisor to be aware of changes and curriculum details which are not incorporated on this form.*

## MAJOR SEQUENCE AND DEGREE REQUIREMENTS

Major: **BA MATHEMATICS**  
 Option: **ACTUARIAL SCIENCE**  
 Major Field Requirements: **43.0- 45.0 credits**  
 Other Requirements: **19.0 - 25.0 credits**

When applicable, up to six of the **REQUIRED RELATED** courses may be credited toward the Liberal Arts Core subject to normal distribution rules.

Course No.	Short Title	C.H.	Grade	Course No.	Short Title	C.H.	Grade
<b>REQUIRED MATHEMATICS COURSES (25.0-26.0 credits)</b>				<b>REQUIRED RELATED COURSES (19.0-25.0 credits)</b>			
MATH 161	Calculus I*	4.0	_____	CSCI 161	Intro to Programming I	4.0	_____
MATH 211	Calculus II	4.0	_____	ECON 101	Prin. Macroeconomics	3.0	_____
MATH 310	Intro Mathematical Proof	3.0	_____	ECON 102	Prin. Microeconomics	3.0	_____
MATH 311	Calculus III	4.0	_____				
MATH 322	Linear Algebra I	4.0	_____				
MATH 345	Abstract Algebra I	3.0	_____				
MATH 464	Real Analysis I	3.0	_____				
*With permission, MATH 163 Honors Calculus I may be taken in place of MATH 161.				<b>Foreign Language Competency (3.0-6.0 credits)</b> FORL through the elementary level (102 or higher) is required.			
				_____			
				_____			
<b>REQUIRED COURSES - Actuarial Science Option (19.0 credits)</b>				<b>And choose one of the following options:</b>			
MATH 319	Calc & Actuarial Sci Seminar	1.0	_____	a) Two courses (at least 3.0 credits each) chosen from the departments of Biology, Chemistry, Computer Science, Earth Science, and Physics, which count toward the major in that department. In addition, PHIL 312 (Mathematical Logic) may be used.			
MATH 335	Mathematical Statistics I	3.0	_____				
MATH 375	Numerical Analysis	3.0	_____				
MATH 435	Mathematical Statistics II	3.0	_____				
MATH 535	Statistical Methods I	3.0	_____				
Choose two additional MATH courses from the following electives list.				<b>---OR---</b>			
MATH 353	Survey of Geometry	3.0	_____	(b) Three courses (at least 3.0 credits each) chosen from a single department which count toward the major in that department.			
MATH 355	Transformational Geometry	3.0	_____				
MATH 365	Ord. Differential Equations	3.0	_____				
MATH 370	Operations Research	3.0	_____				
MATH 393	Number Theory	3.0	_____				
MATH 395	Intro Combinatorics	3.0	_____	Additional recommended courses: MATH 422, 536, BUAD 161, 162			
MATH 422	Linear Algebra II	3.0	_____				
MATH 445	Abstract Algebra II	3.0	_____				
MATH 457	Elem. Differential Geometry	3.0	_____				
MATH 465	Real Analysis II	3.0	_____				
MATH 467	Partial Differential Equations	3.0	_____				
MATH 471	Mathematical Modeling	3.0	_____				
MATH 472	Financial Mathematics	3.0	_____				
MATH 483	Point - Set Topology	3.0	_____				
MATH 4__	Topics in _____	_____	_____				
MATH 4__	Topics in _____	_____	_____				
MATH 536	Statistical Methods II	3.0	_____	<b>General Electives (as necessary)</b>			
MATH 566	Complex Variables	3.0	_____	_____			
MATH 592	Graph Theory	3.0	_____	_____			
MATH _____	_____	_____	_____	_____			
MATH _____	_____	_____	_____	_____			