STUDENT ID #_____ VCU Date_____

Virginia Commonwealth University

B.S. IN MATHEMATICAL SCIENCES 2008-09

College of Humanities and Sciences General Education Requirements

NAME_____

Foundational Courses

1. Writing : Complete each course.	Credits	Grade
UNIV 111 Focused Inquiry I	3	
UNIV 112 Focused Inquiry II (C grade or better required)	3	
ENGL 200 or academic research writing course (C grade or better required; must complete 24 credits before enrolling)	3	

2. Mathematics & Statistics: Choose one course.		
MATH 141 Algebra with Applications or MATH 151 Precalculus or MATH 200 Calculus with Analytic Geometry I (beginning level determine by placement test)		
Course Taken		

Supporting Courses

3. Human, Social, and Political Behavior: Choose one course.		
ANTH/INTL 103 Introduction to Anthropology HUMS 300 Great Questions of the Social Sciences POLI 103 U.S. Government PSYC 101 Introduction to Psychology SOCY 101 General Sociology		
Course Taken	3	

4. Science and Technology: Choose one course.		
BIOL 101 Biological Concepts (4 credits) BIOL/ENVS 103 Environmental Science (4 credits) CHEM 110 Chemistry and Society FRSC 202 Crime and Science INSC 201 Energy! (prerequisite: MATH 131, STAT 208 or higher level MATH or STAT) PHYS 103 Elementary Astronomy		
Course Taken		

5. Diverse and Global Communities: Choose one course.		
INTL 101 Human Societies and Globalization MASC/INTL 151 Global Communication POLI/INTL 105 International Relations RELS 108 Human Spirituality WMNS 201 Introduction to Women's Studies		
Course Taken	3	

6. Literature and Civilization: Choose one course.		
ENGL 215 Readings in Literature HIST 201 The Art of Historical Detection HUMS 250 Reading Film PHIL 201 Critical Thinking About Moral Problems WRLD 203 Cultural Texts and Contexts WRLD 230 Introduction to World Cinema		
Course Taken	3	

7. General Education Electives: Choose any 2 additional courses from boxes 3, 4, 5, or 6 (must be from two different boxes).		
Course Taken		
Course Taken		

Experiential Courses

8. General Education Modules: Complete each.		
Experiencing the Fine Arts: successfully complete one course from the School of the Arts (1-3 credits)		
HUMS 202 Choices in a Consumer Society	1	
Computer Literacy Requirement		

9. Foreign Language: Must demonstrate competency through the 102 level by previous high school background or placement test.		
101 level		
102 level		

10. Senior Capstone: taken in major within last 30 credit hours		

❑ Has VCCS Associate Degree _____

MATHEMATICAL SCIENCES Major Requirements

The Bachelor of Science degree awarded by the Department of Mathematics and Applied Mathematics requires a minimum of 42 credits above the 100 level in courses labeled MATH, OPER, or STAT. Students choose the concentration in mathematics, applied mathematic, biomathematics or secondary mathematics teacher preparation. At least 24 of these credits must be at the 300-500 levels.

Applied Mathematics
MATH 301 Differential Equations; MATH 512 Complex Analysis for Applications; MATH 517-518 Methods of Applied Mathematics; and six additional upper-level credits in mathematical sciences. (MATH 302 Numerical Calculus, MATH 437 Applied Partial Differential Equations, and MATH 511 Applied Linear Algebra are recommended.)

Mathematics
MATH 501 Intro to Abstract Algebra; MATH 507-508 Analysis I-II; MATH 509 General Topology; and six additional upper-level credits in mathematical sciences.

Secondary Teacher Preparation
MATH 327 Mathematical Modeling; MATH 504 Algebraic Structures and Functions; MATH 505 Modern Geometry; MATH 507 Analysis I; MATH 530 History of Mathematics; MATH 554 Using Technology in the Teaching of Mathematics

Biomathematics
MATH 301 Differential Equations; MATH 380 Introduction to Mathematical Biology; MATH 527-528 Methods of Applied Mathematics for Life Sciences; MATH 529 Computational Modeling in Mathematical Biology; and three additional upper level credits in mathematical sciences.

CONCENTRATION_____

Mathematics Core: Required for all Mathematical Science majors.	Credits	Grade
MATH 200 Calculus with Analytic Geometry I		
STAT 212 Concepts of Statistics		
MATH 201 Calculus with Analytic Geometry II		
MATH 255 Introduction to Computational Mathematics		
MATH 300 Introduction to Mathematical Reasoning		
MATH 307 Multivariate Calculus		
MATH 310 Linear Algebra		
MATH 490 Mathematical Expositions		

Concentration: Other required courses in mathematics		

Natural Sciences: Complete one of the following sequences of courses with lab: BIOL 151-152 OR PHYS 207-208 OR PHYS 201-202 OR CHEM 101-102 .		
Complete another course with lab in the natural sciences. This course must be in the biological sciences if the above sequence was in PHYS or CHEM OR must be in the physical sciences if the BIOL sequence was selected.		
Complete one other course in the natural sciences OR complete a minor or second major offered outside the Department of Mathematical Sciences. Students in the Extended Teacher Preparation program are considered to have a second major outside the Department of Mathematical Sciences.		

Electives: Select additional courses to satisfy the 120 credits needed to graduate.	Credits	Grade

Additional degree requirements

- ❑ *Cumulative 2.00 GPA*
- ❑ *2.00 GPA in the major*
- ❑ *45 credits in upper level courses or the equivalent*
- ❑ *120 Total Earned Hours*
- ❑ *30 At least 30 of the last 45 credits taken at VCU*