

B.S. IN MATHEMATICAL SCIENCES

2005-06

General Education Requirements

NAME _____

Writing	Credits	Grade
ENGL 101 Writing & Rhetoric I (C grade or better required)		
ENGL 200 Writing & Rhetoric II (C grade or better required; must complete 24 credits before enrolling)		

Writing Intensive: 2 WI courses required, at least one must be in the major. See Approved List A.		
MATH 490 Mathematical Expositions (also fulfills a major requirement)		

Math & Statistics:		
MATH 151 Pre-calculus (MATH 141 or Placement)		

Ethical Principles: Select a course from Approved List C.		

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 from Approved List D. 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.		

Visual & Performing Arts: Take 2-3 credits from Approved List E.	Credits	Grade

Literature: Take a literature course from Approved List F.		

Civilization: Take 1 course from each area listed (9 credits total) but no more than 6 credits in any one discipline OR take two 4-credit interdisciplinary courses (8 credits total) that combine elements of each area.		
Historical and Cultural Origins: 1 course from Approved List G.		
American (U.S.) Studies: 1 course from Approved List H.		
Global Studies: 1 course from Approved List I.		

Foreign Language: Must demonstrate competency through 102 level by course or placement test.		
101 level		
102 level		

Human Behavior: Take 2 courses in different disciplines from Approved List J.		

Urban Environment: Take 1 course from Approved List K.		

 Has VCCS Associate Degree _____

The Bachelor of Science degree awarded by the Department of Mathematics and Applied Mathematics requires a minimum of 41 credits above the 100 level in courses labeled MATH, OPER, or STAT. Students choose the concentration in mathematics, applied mathematics 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

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 Analytics 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	Credits	Grade

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
- Computer literacy requirement (must either pass Computer Proficiency Assessment or pass INFO 160,161, & 162 courses or equivalent transfer course)