

# MATHEMATICS

Degree: Bachelor of Science  
 Specializations: Mathematics  
 Computational and Applied Mathematics  
 Financial Mathematics and Applied Statistics  
 Mathematics in Teaching  
 Minor: Mathematics  
 Department: Mathematics and Statistics  
 Building 38, Room 135A  
 (850) 474-2276  
<http://uwf.edu/mathstat/>  
[mathstat@uwf.edu](mailto:mathstat@uwf.edu)  
 College: Arts and Sciences  
 Semester Hours Required for Degree: 120

Faculty: K. Li (Chairperson), R.W. Amin, S.C. Bagui, C.M. Bundrick (Emeritus), L.S. Bushway, F. Fedele, R. Hemasinha, J.S. Kuhl, J. Liu, Z. Manseur, M.L. Marx, S. McNiel, M.M. Ncube, R.S. Novosad (Emeritus), A.U. Okafor, S.E. Shamma (Emeritus), D.L. Sherry (Emeritus), F. Tone, J.A. Uvah, J.R. Weaver (Emeritus), H. Zhang

The undergraduate curriculum of the Department of Mathematics and Statistics prepares the student for graduate study; teaching; service in science, government and industry; and supporting roles in the social, biological, and physical sciences. This program emphasizes mathematics and statistics.

The bachelor's degree program permits students considerable flexibility in choosing electives outside the major. It is recommended that students seek the advice of faculty regarding career opportunities and choice of a suitable minor.

## PROGRAM REQUIREMENTS

In addition to general University requirements, students seeking the B.S. in Mathematics must meet the requirements listed below.

Students should consult with their academic advisor for courses which may satisfy both the general education requirements and prerequisites.

### General Studies (36 sh)

For additional information see the General Studies section of this *Catalog*.

### Common Prerequisites (23 sh)

State mandated common prerequisites must be completed prior to graduation, but are not required for admission to the program. Courses in brackets indicate substitutes from Florida Public Junior/Community Colleges and Universities.

COP	xxxx	Computer Language elective .....	3
+	MAC 2311	Analytic Geometry & Calculus I .....	4
		[MAC x311]	
+	MAC 2312	Analytic Geometry & Calculus II .....	4
		[MAC x312]	
+	MAC 2313	Analytic Geometry & Calculus III .....	4
		[MAC x313]	
+	Two lab-based science courses .....		8

+ Indicates common prerequisites which can be used to satisfy General Studies requirements.

### Lower Division Electives (1-14 sh)

Sufficient 1000/2000 level electives to complete at least 60 semester hours in the lower division. Current UWF students may use elective courses at any level (1000-4999) to meet this elective requirement.

## MATHEMATICS SPECIALIZATION

### Major (32-35 sh)

#### Mathematics Core (17-20 sh)

MAD	4401	Numerical Analysis .....	3
MAS	3105	Linear Algebra .....	3
MAT	4500	Undergraduate Proseminar in Mathematics/Statistics .....	1
MHF	3202	Set Theory & Mathematical Logic .....	3
STA	3162C	Applied Statistics .....	4
STA	4321	Introduction to Mathematical Statistics I.....	3

#### If not taken at the Lower Division (0-3 sh):

MAP	2302	Differential Equations .....	3
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#### Mathematics Specialization (15 sh)

MAA	4211	Advanced Calculus I .....	3
MAS	4301	Abstract Algebra .....	3
3000/4000 level advisor-approved mathematics or statistics electives .....			9

### Major-Related (0 sh)

### Upper Division Electives (25-28 sh)

Sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or completion of all departmental requirements at the 3000/4000 level, whichever is greater.

## COMPUTATIONAL AND APPLIED MATHEMATICS SPECIALIZATION

### Major (32-35 sh)

#### Mathematics Core (17-20 sh)

Same as Mathematics Specialization

#### Computational and Applied Mathematics Specialization (15 sh)

3000/4000 level advisor-approved mathematics or statistics courses .....			15
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### Major-Related (15 sh)

3000/4000 level advisor-approved computer science courses .....			15
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### Upper Division Electives (10-13 sh)

Sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or completion of all departmental requirements at the 3000/4000 level, whichever is greater.

## FINANCIAL MATHEMATICS AND APPLIED STATISTICS SPECIALIZATION

### **Major (32-35 sh)**

Mathematics Core (17-20 sh)  
Same as Mathematics Specialization

Financial Mathematics and Applied Statistics  
Specialization (15 sh)

3000/4000 level advisor-approved mathematics or  
statistics courses .....15

### **Major-Related (15 sh)**

Advisor-approved courses from the College of Business .....15

### **Upper Division Electives (10-13 sh)**

Sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or completion of all departmental requirements at the 3000/4000 level, whichever is greater.

## MATHEMATICS TEACHING SPECIALIZATION

### **Major (32-35 sh)**

Mathematics Core (17-20 sh)  
Same as Mathematics Specialization

Mathematics Teaching Specialization (15 sh)

MAS 4203 Number Theory .....3

MTG 3212 Modern Geometry .....3

3000/4000 level advisor-approved mathematics or  
statistics courses .....9

### **Major-Related (15 sh)**

3000/4000 level advisor-approved courses from the  
College of Professional Studies .....15

### **Upper Division Electives (10-13 sh)**

Sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or completion of all departmental requirements at the 3000/4000 level, whichever is greater.

## MINOR

A Minor in Mathematics requires completion of 15 sh approved by the mathematics department in courses beyond the level of MAC 2313. A list of approved courses may be obtained from the department. Mathematics majors may not earn this minor.