MATHEMATICS, BACHELOR OF SCIENCE (B.S.)

Program Objectives

Upon successful completion of this program, the graduate will:

1. be able to use relevant technology to solve problems;
2. be able to communicate mathematical proofs, definitions, and ideas in an understandable way; and
3. be able to apply learned theory, definitions, and processes to solve new problems.

In addition, students in the Teaching concentration will be prepared for certification to teach mathematics at the secondary level. Refer to the College of Education section of this *Catalog* regarding several teacher certification requirements associated with this degree program.

Program Requirements

CIP Code: 27.0101

Major

Code	Title	Hours
University Graduation Requirements		
General Education (http://catalogs.eku.edu/undergraduate/general-academic-information/general-education-requirements/)		36
Foundations of Learning		
GSD 101	Foundations of Learning	3
Upper division courses (42 hrs. distributed throughout Major/ Supporting/Gen Ed/Free Electives categories)		
Major Requirements [i, ii, iii]		
Core Courses		
CSC 174	Introduction to Programming for Science & Engineering	3
or CSC 190	Object- Oriented Programming I	
MAT 234	Calculus I	4
MAT 239	Linear Algebra and Matrices	3
MAT 244	Calculus II	4
MAT 254	Calculus III	4
MAT 306	Discrete Mathematics	3
or MAT 307	Number Theory	
MAT 308	Modern Algebra I	3
MAT 315	Introduction to Analysis	3
Concentrations		
Students must select one of the following Concentrations:		18-53
General Mathematics		
Mathematics Teaching		
Supporting Course Requirements		
STA 270	Applied Statistics (Element 2) [1, G]	4
Free Electives		
Choose from 0-35 hours of free electives		0-35
Students planning to attend a graduate school in mathematics are strongly encouraged to select an in-depth study of a single foreign language as a part of their program.		
Total Hours		**120**

[1] Three hours count toward Element 2[G]

G Course also satisfies a General Education element. Hours are included within the 36 hours in General Education.

i. No course may be used to satisfy a core course and a concentration elective.

ii. At least five upper-division courses which satisfy the major requirements (including core and concentration) must be completed at EKU.

iii. Only courses completed with a grade of at least "C" will count toward the major requirements (including core and concentration).

General Mathematics Concentration

Code	Title	Hours
Concentration Courses		
Choose from eighteen hours of the following:		18
Any MAT course numbered 300 or above [1, 2]		
Any STA or DSC course numbered 300 or above [3]		
Total Hours		**18**

[1] MAT 507 Seminar in Mathematics:___ only with department approval.

[2] Except MAT 349 Applied Learning in Mathematics. No course can be used to satisfy a core course and a concentration elective.

[3] Except for STA 349 Applied Learning in Statistics. No more than six hours of STA and DSC courses may be used to fulfill this requirement.

Mathematics Teaching Concentration

The student must meet the 2.75 GPA requirement listed in the College of Education section under The Office of Teacher Education Services.

Code	Title	Hours
Concentration Courses		
MAE 303	Math Models and Applications	3
MAE 305	Problem Solving and Technology	3
MAT 203	Geometry for 7-12 Teachers	3
Choose three hours from the following:		3
CSC 320	Algorithms II	
any MAT course numbered 300 or above [1]		
any STA course numbered 300 or above [2]		
Professional Education Requirement		
EDC 300	Differentiation in Inclusive Classrooms	3
EDF 203	Educational Foundations	3
EDF 204	Emerging Instructional Technologies	2
EDF 219	Human Development and Learning	3
EDF 413	Assessment in Education	3
EMS 300	Curriculum and Instructional Design	3
EMS 474	Disciplinary Literacy	3
EMS 490	Classroom & Behavior Management	3
ESE 550	Teaching Mathematics in the Secondary School	3
SED 104	Special Education Introduction [G, 3]	3
Clinical Experiences:		

CED 100	Clinical I: Introduction to the Education Profession	0.5
CED 200	Clinical II: Understanding the Learner	0.5
CED 300	Clinical III: Curriculum and Instructional Design	0.5
CED 400	Clinical IV: Diagnosis and Prescription	0.5
CED 450	Clinical V: Practicing Teaching	1
CED 499	Clinical VI: The Professional Semester	9
Exit Requirements		
PRAXIS Exams		
Students in the Mathematics Teaching concentration must register for and take the PRAXIS exams which correlate to their degree program, per College of Education requirements. The PRAXIS exams must be taken prior to student teaching.		
Total Hours		**53**

[1] Except MAT 349 Applied Learning in Mathematics. No course can be used to satisfy a core course and a concentration elective.

[2] Except for STA 349 Applied Learning in Statistics

[3] Three hours count toward Element 6[G].

G Course also satisfies a General Education element. Hours are included within the 36 hours in General Education.