

# MATHEMATICS - MINOR

## College of Arts and Sciences

Department of Mathematical Sciences  
 233 Mathematics and Computer Science Building  
 Kent Campus  
 330-672-2430  
 math@math.kent.edu  
 www.kent.edu/math

## Description

The Mathematics minor offers study in several areas of pure mathematics and can be combined with several majors, including those in the sciences and education.

### Fully Offered At:

- Kent Campus
- Stark Campus

## Admission Requirements

Admission to a minor is open to students declared in a bachelor's degree, the A.A.B. or A.A.S. degree or the A.T.S. degree (not Individualized Program major). Students declared only in the A.A. or A.S. degree or the A.T.S. degree in Individualized Program may not declare a minor. Students may not pursue a minor and a major in the same discipline.

## Minor Requirements

Code	Title	Credit Hours
<b>Prerequisite Requirements</b>		
MATH 10774	ALGEBRA FOR CALCULUS STRETCH II (KMCR)	
	or MATH 10775 ALGEBRA FOR CALCULUS PLUS (KMCR)	
	or MATH 11010 ALGEBRA FOR CALCULUS (KMCR)	
MATH 11022	TRIGONOMETRY (KMCR)	
Computer Programming Elective, choose from the following:		
CS 10051	INTRODUCTION TO COMPUTER SCIENCE (KMCR)	
CS 10062	PROGRAMMING FOR PROBLEM SOLVING IN SCIENCES	
CS 13001	COMPUTER SCIENCE I: PROGRAMMING AND PROBLEM SOLVING	
CS 13011 & CS 13012	COMPUTER SCIENCE IA: PROCEDURAL PROGRAMMING and COMPUTER SCIENCE IB: OBJECT ORIENTED PROGRAMMING (min C grade in both courses)	
DSCI 15310	COMPUTATIONAL THINKING AND PROGRAMMING	
<b>Minor Requirements</b>		
MATH 12002	ANALYTIC GEOMETRY AND CALCULUS I (KMCR)	5
MATH 12003	ANALYTIC GEOMETRY AND CALCULUS II	5
MATH 21001	LINEAR ALGEBRA	3
MATH 22005	ANALYTIC GEOMETRY AND CALCULUS III	4
MATH 31011	PROOFS IN DISCRETE MATHEMATICS	3
	or MATH 32044 ORDINARY DIFFERENTIAL EQUATIONS	

or Mathematics Upper-Division Course (MATH 40000 level)		
Mathematics Electives, choose from the following:		6
<b>Algebra</b>		
MATH 41001	MODERN ALGEBRA I (ELR) (WIC)	
MATH 41002	MODERN ALGEBRA II (ELR) (WIC)	
MATH 41021	THEORY OF MATRICES	
MATH 47011	THEORY OF NUMBERS	
<b>Analysis</b>		
MATH 42001	ANALYSIS I (ELR) (WIC)	
MATH 42002	ANALYSIS II (ELR) (WIC)	
MATH 42041	ADVANCED CALCULUS	
MATH 42045	PARTIAL DIFFERENTIAL EQUATIONS	
MATH 42048	COMPLEX VARIABLES	
<b>Geometry/Topology</b>		
MATH 42021	GRAPH THEORY AND COMBINATORICS	
MATH 45011	DIFFERENTIAL GEOMETRY	
MATH 45021	EUCLIDEAN GEOMETRY	
MATH 45022	LINEAR GEOMETRY	
MATH 46001	ELEMENTARY TOPOLOGY	
Minimum Total Credit Hours:		26

## Graduation Requirements

- Minimum Minor GPA**
- 2.000
- Students must complete at least two upper-division (30000 or 40000 level) courses in the minor at Kent State on a graded basis (A-F).
  - Minimum 6 credit hours in the minor must be upper-division coursework (30000 and 40000 level).
  - Minimum 6 credit hours in the minor must be outside of the course requirements for any major or other minor the student is pursuing.
  - Minimum 50 percent of the total credit hours for the minor must be taken at Kent State (in residence).