MATHEMATICS - MINOR

College of Arts and Sciences
Department of Mathematical Sciences
www.kent.edu/math

About This Program

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.

Contact Information

- **Xiaoyu Zheng** | xzheng3@kent.edu | 330-672-9089
- Speak with an Advisor
  - Kent Campus
  - Stark Campus

Program Delivery

- **Delivery:**
  - In person
- **Location:**
  - 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.

Program Requirements

Minor Requirements

Code	Title	Credit Hours
Prerequisite Requirements		
CS 10051	COMPUTER SCIENCE PRINCIPLES (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)	
EMAT 25310	CREATIVE CODING	
Minor Requirements		
MATH 12002	ANALYTIC GEOMETRY AND CALCULUS I (KMCR) (min C grade)	5
MATH 12003	ANALYTIC GEOMETRY AND CALCULUS II (min C grade)	3-5
or MATH 12013	BRIEF CALCULUS II	
MATH 20011	DECISION-MAKING UNDER UNCERTAINTY	3-4
or MATH 22005	ANALYTIC GEOMETRY AND CALCULUS III	
MATH 21001	LINEAR ALGEBRA (min C grade)	3
or MATH 21002	APPLIED LINEAR ALGEBRA	
MATH 23022	DISCRETE STRUCTURES FOR COMPUTER SCIENCE	3
or MATH 31011	PROOFS IN DISCRETE MATHEMATICS	
or MATH 32044	ORDINARY DIFFERENTIAL EQUATIONS	
or Mathematics Upper-Division Course (MATH 40000 level)		
Mathematics Electives, choose from the following: [1]		6
MATH 41001	MODERN ALGEBRA I (ELR) (WIC)	
MATH 41002	MODERN ALGEBRA II (ELR) (WIC)	
MATH 41021	THEORY OF MATRICES	
MATH 42001	ANALYSIS I (ELR) (WIC)	
MATH 42002	ANALYSIS II (ELR) (WIC)	
MATH 42021	GRAPH THEORY AND COMBINATORICS	
MATH 42041	ADVANCED CALCULUS	
MATH 42045	PARTIAL DIFFERENTIAL EQUATIONS	
MATH 42048	COMPLEX VARIABLES	
MATH 45011	DIFFERENTIAL GEOMETRY	
MATH 45021	EUCLIDEAN GEOMETRY	
MATH 45022	LINEAR GEOMETRY	
MATH 46001	ELEMENTARY TOPOLOGY	
MATH 47011	THEORY OF NUMBERS	
Minimum Total Credit Hours:		**23**

[1] Students should select electives in consultation with the student's minor advisor.

Graduation Requirements

Minimum Minor GPA	Minimum Overall GPA
2.000	2.000

- 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).

Program Learning Outcomes

Graduates of this program will be able to:

1. Formulate, analyze and solve problems, logically and critically, in proper math settings.