APPLIED MATHEMATICS - MINOR

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

About This Program

The Applied Mathematics minor offers courses in several areas of mathematics that are applicable to sciences and can be combined with science majors.

Contact Information

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- 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

Code	Title	Credit Hours
Minor Prerequisites		
CS 10062	PROGRAMMING FOR PROBLEM SOLVING IN SCIENCES (min C grade)	
CS 13001	COMPUTER SCIENCE I: PROGRAMMING AND PROBLEM SOLVING (min C grade)	
CS 13011 & CS 13012	COMPUTER SCIENCE IA: PROCEDURAL PROGRAMMING and COMPUTER SCIENCE IB: OBJECT ORIENTED PROGRAMMING (min C grade)	
EMAT 25310	CREATIVE CODING (min C grade)	
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	
Section A or B, choose from the following:		8-10
Selection A		
MATH 21001	LINEAR ALGEBRA (min C grade in either course)	
or MATH 21002	APPLIED LINEAR ALGEBRA	
MATH 22005	ANALYTIC GEOMETRY AND CALCULUS III (min C grade)	
MATH 32044	ORDINARY DIFFERENTIAL EQUATIONS	
Selection B		
MATH 32051	MATHEMATICAL METHODS IN THE PHYSICAL SCIENCES I (min C grade)	
MATH 32052	MATHEMATICAL METHODS IN THE PHYSICAL SCIENCES II	
Minor Electives, choose from the following: [1]		6
MATH 23022	DISCRETE STRUCTURES FOR COMPUTER SCIENCE [2]	
or MATH 31011	PROOFS IN DISCRETE MATHEMATICS	
MATH 40011	PROBABILITY THEORY AND APPLICATIONS	
MATH 40012	THEORY OF STATISTICS (WIC)	
MATH 40051	TOPICS IN PROBABILITY THEORY AND STOCHASTIC PROCESSES	
MATH 41021	THEORY OF MATRICES	
MATH 42011	MATHEMATICAL OPTIMIZATION	
MATH 42031	MATHEMATICAL MODELS AND DYNAMICAL SYSTEMS	
MATH 42039	MODELING PROJECTS (ELR) (WIC)	
MATH 42041	ADVANCED CALCULUS	
MATH 42045	PARTIAL DIFFERENTIAL EQUATIONS	
MATH 42048	COMPLEX VARIABLES	
MATH 42201	NUMERICAL LINEAR ALGEBRA	
MATH 42202	NUMERICAL APPROXIMATION AND OPTIMIZATION	
Minimum Total Credit Hours:		**22**

[1] Students should select electives in consultation with their minor advisor.

[2] Credit for both MATH 23022 (or its equivalent CS 23022) and MATH 31011 is not permitted toward the minor. Students planning to take Computer Science upper-division courses (CS 30000 or 40000 level) must take MATH 23022.

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 using a variety of problem solving strategies.