

# MATHEMATICS > APPLIED MATHEMATICS

Whether you know it or not, advanced math is part of everyday activities. Applied mathematics is an interdisciplinary subject, covering a wide range of scientific activities. It is math dealing with problems arising in the physical life, social sciences, and engineering, and provides a broad background in both quantitative and qualitative knowledge for use in these fields. Mathematical modeling and analysis unify ideas and provide a richer, deeper understanding of their respective fields. Applied mathematics appeal to people of varying interests: Some seek to obtain a sound math background for use in a future career; others wish to learn mathematics and techniques of a specific field; and still others are just interested in applied math itself. The Mathematics degree program at Wayne State College focuses on not just equations but on how to apply these equations to solve challenges in other fields of study. With a math degree, you'll be ready for careers in a variety of fields – business, physics, chemistry, computer science, economics, engineering, or social sciences.

## fast facts

### Hours:

52 hours for concentration  
30 hours in general education

*At least 120 hours are required for graduation from Wayne State College. You may add a second major, minor, or electives to help meet these requirements.*

**Degrees offered:** B.A. or B.S.

**Department:** Physical Sciences and Mathematics

**School:** Science, Health, and Criminal Justice

**Internship:** Encouraged but not required

**Popular minors:** Biology, Computer Science, Chemistry, Economics, Physics

## focus on results

### Skills Learned

- Methods to solve problems in math and science
- Proficiency in solving complex math problems
- Probability and statistics
- Mathematical modeling
- Computer programming fundamentals
- Data analysis and interpretation
- Critical thinking and problem-solving

### Possible Careers

- Mathematician
- Computer scientist
- Computer programmer
- Actuary
- Financial consultant
- Economist
- Statistician
- Cryptographer
- Research analyst
- Biostatistician
- Mathematical biologist

### Types of Employers

- Businesses and organizations
- Software companies
- Biotech companies
- Banks and financial institutions
- Schools, colleges, and universities
- Government / federal agencies
- Medical research facilities
- Science labs
- Insurance companies
- Financial firms
- Investment companies

## outside the classroom



Visit [www.wsc.edu/clubs](http://www.wsc.edu/clubs) to learn more about clubs and organizations on campus.

### Activities / Opportunities

- Conduct projects
- National and regional conferences
- Peer mentoring and tutoring
- Service-Learning
- Study Abroad
- Supplemental instruction leader

### Clubs / Organizations

- Kappa Mu Epsilon (Math Honorary)

# Sample program of study

2023-24 Academic Year

Every effort is made to ensure this information is current, but please be aware that some content may have changed. There is no substitute for developing a careful course registration plan in consultation with your advisor. The class sequence listed is suggested only. The final decision rests with the student and academic advisor.

Students' actual schedules will vary based upon their readiness for calculus, when they begin the program, course rotations, and the emphasis they choose.

## Freshman - 1st semester

CSC 150 Programming Fundamentals I.....	3
MAT 140 Calculus (General Studies CAT 3).....	5
General Studies.....	6

## Freshman - 2nd semester

CSC 160 Programming Fundamentals II.....	3
MAT 240 Calculus II.....	5
MAT 335 Math Modeling.....	3
General Studies.....	6

## Sophomore - 1st semester

MAT 270 Foundations of Math.....	3
MAT 340 Calculus III.....	5
General Studies.....	6

## Sophomore - 2nd semester

MAT 250 Differential Equations.....	3
MAT 410 Probability and Statistics.....	4
General Studies.....	9

## Junior - 1st semester

MAT 305 Discrete Math.....	3
MAT 400 Real Analysis.....	4
300/400 elective.....	3
Elective.....	6

## Junior - 2nd semester

MAT 350 Linear Algebra.....	3
MAT 440 Numerical Analysis.....	3
Electives.....	9

## Senior - 1st semester

MAT 470 Connections.....	2
MAT 481 Math Assessment.....	0
300/400 electives.....	6
Emphasis elective.....	3
Elective.....	3

## Senior - 2nd semester

Emphasis elective.....	3
Electives.....	12

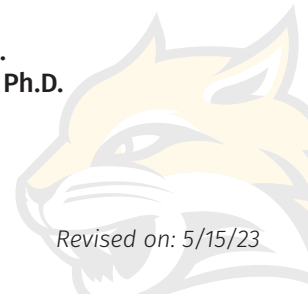
## mathematics faculty



Visit [www.wsc.edu/psm](http://www.wsc.edu/psm) to learn more about the Department Physical Sciences and Mathematics.

**Al Mitchell, Ph.D.**  
**Department Chair**  
Carhart Science 107B  
402-375-7334  
[almitch1@wsc.edu](mailto:almitch1@wsc.edu)

**Mary Kuchta, Ed.D.**  
**Jennifer Langdon, Ph.D.**



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