

focus on

2018-19 Academic Year

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 applied 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 an applied 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, a minor, or electives to help meet these requirements.

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

Department: Physical Sciences and Mathematics

School: Natural and Social Sciences

Internship: Encouraged but not required

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

..... 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 languages
- 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 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

Clubs / Organizations

- Kappa Mu Epsilon
- Math Club

SAMPLE PROGRAM OF STUDY

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. For questions about this content, please see your 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

MAT 140 Calculus (General Studies CAT 3)	5
CSC 150 Programming Fundamentals I	3
General Studies CAT 1 and CAT 2	6

FRESHMAN - 2nd semester

MAT 240 Calculus II	5
MAT 270 Foundations of Math	3
MAT 281 Assessment I	0
MAT 282 Assessment II	0
CSC 160 Programming Fundamentals II	3
General Studies CAT 4	3

SOPHOMORE - 1st semester

ECO 202 Principles of Macroeconomics (General Studies CAT 10)	3
MAT 340 Calculus III	5
General Studies CAT 5	3

SOPHOMORE - 2nd semester

BIO 110 Biology Concepts / Lab (General Studies CAT 7)	4
ECO 203 Principles of Microeconomics (General Studies CAT 8)	3
MAT 250 Differential Equations	3
MAT 335 Math Modeling	3
General Studies CAT 6	3

JUNIOR - 1st semester

MAT 305 Discrete Math	3
MAT 400 Real Analysis	4
300/400 elective	3
General Studies CAT 9	3
Elective	3

JUNIOR - 2nd semester

MAT 350 Linear Algebra	3
MAT 410 Probability and Statistics	4
MAT 440 Numerical Analysis	3
Electives	6

SENIOR - 1st semester

MAT 470 Connections	2
MAT 481 Assessment III	0
300/400 elective	3
Emphasis elective	3
Electives	9

SENIOR - 2nd semester

MAT 405 Applied Mathematics	3
Emphasis elective	3
Electives	9

mathematics
faculty

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