MATHEMATICS

Mathematics is the language of science and technology. Its explosive development during the 20th Century and its history as the oldest and most highly developed discipline make math one of the most exciting and rewarding areas of study for the 21st Century.

Background Information

In the past few years, a tremendous increase has occurred in the need for mathematics and mathematicians. In such fields as actuarial science, computer science, statistics, engineering, economics and commerce, mathematical training is in high demand.

If you enjoy mathematics and are good at it, you will find both challenges and opportunities in the Department of Mathematics at North Dakota State University. Your advisor, a faculty member in the department, will provide you with information concerning courses, curricula and the many exciting and rewarding careers open to mathematics graduates. The Cooperative Education Program offers the possibility of academic credit for on-the-job training. The student mathematics organization, Math Club, brings in both academic and non-academic speakers who explore career possibilities and fascinating topics in mathematics at club meetings. Opportunities for paper grading and tutoring are available and allow students to deepen their understanding by assisting others in learning mathematics.

Our faculty members contribute research findings in a variety of areas in theoretical and applied mathematics to internationally known journals. This wide variety of areas of specialization and expertise of faculty members in the department means that you will probably find someone both interested and knowledgeable in any area of mathematics that might fascinate you.

The Program

The Department of Mathematics offers a broad and balanced curriculum of courses taught by a faculty of 15. A student may choose to major in mathematics or mathematics education. Minors in related areas are encouraged. These choices may be made immediately or deferred until the basic course work is completed. In addition to the Bachelor of Science degree, the department offers master's and doctorate degrees.

Career Opportunities

Our students have been very successful in finding employment. Graduates are working in a wide variety of corporations, agencies, universities and school systems. A number continue on for advanced degrees.

The Faculty

- A. Akhmedov, Ph.D., Yale, 2004
- M.A. Alfonseca, Ph.D., Universidad Autonoma de Madrid, 2003
- N. Barabanov, Ph.D., University of Kiev, 1979
- J. Boynton, Ph.D., Florida Atlantic University, 2006
- C. Ciuperca, Ph.D., University of Kansas, 2001
- D. Cömez, Ph.D., University of Toronto, 1983
- J. Dorfmeister, Ph.D., University of Minnesota, 2009
- B. Duncan, Ph.D., University of Nebraska - Lincoln, 2004
- F. Littmann, Ph.D., University of Illinois at Urbana - Champaign, 2003
- W. Martin, Ph.D., University of Wisconsin - Madison, 1993
- A. Novozhilov, Ph.D., Moscow State University of Railway Engineering, 2002
- I. SenGupta, Ph.D., Texas A&M, 2010
- J. Striker, Ph.D., University of Minnesota, 2008
- A. Ungar, Ph.D., University of Tel Aviv, 1973
- I. Yegorov, Ph.D., Lomonosov Moscow State University, 2014

The Curriculum

For a mathematics major, 57 credits of mathematics courses are required. The mathematics education major requires 37 credits and emphasizes those areas of mathematics and related disciplines that have proven most useful for secondary school teachers. In addition, there are cooperative double majors in mathematics and computer science, mathematics and physics, and mathematics and statistics, which take advantage of the overlap of requirements and give the student a broader background, thus opening a wider range of career possibilities. Advisors in the Department of Mathematics can furnish details about these and other programs, such as an emphasis in actuarial mathematics.

Mathematics Plan of Study

Please note this is a sample plan of study and not an official curriculum. Actual student schedules for each semester will vary depending on start year, education goals, applicable transfer credit, and course availability. Students are encouraged to work with their academic advisor on a regular basis to review degree progress and customize an individual plan of study.

Freshman			
Fall	**Credits**	**Spring**	**Credits**
MATH 165 Calculus I	4	MATH 166 Calculus II	4
MATH 129 Basic Linear Algebra	3	MATH 329 Intermediate Linear Algebra	3
ENGL 110 College Composition I	4	COMM 110 Fundamentals of Public Speaking	3
Gen Ed Humanities & Fine Arts	3	ENGL 120 College Composition II	3
		Gen Ed Social & Behavioral Sciences	3
	14		**16**
Sophomore			
Fall	**Credits**	**Spring**	**Credits**
MATH 265 Calculus III	4	MATH 266 Introduction to Differential Equations	3
MATH 270 Introduction to Abstract Mathematics	3	MATH 346 Metric Space Topology	3
Related Required Course (15 credits of a minor or 2nd major or elective with at least two 300+ level courses)	3	Related Required Course (15 credits of a minor or 2nd major or elective with at least two 300+ level courses)	3
Gen Ed Humanities & Fine Arts/Gen Ed Cultural Diversity	6	Gen Ed Social & Behavioral Sciences/Gen Ed Global Perspectives	6
	16		**15**
Junior			
Fall	**Credits**	**Spring**	**Credits**
MATH 420 Abstract Algebra I	3	MATH 452 Complex Analysis	3
MATH 450 Real Analysis	3	MATH 483 Partial Differential Equations	3
Gen Ed Upper-Level Writing	3	MATH 300-400 Elective	3
Gen Ed Wellness	2	Gen Ed Science & Technology with laboratory	4
MATH 300-400 Elective	3	Related Required Course (15 credits of a minor or 2nd major or elective with at least two 300+ level courses)	3
	14		**16**
Senior			
Fall	**Credits**	**Spring**	**Credits**
MATH 300-400 Electives	4-6	MATH 491 Seminar	1
Related Required Course (15 credits of a minor or 2nd major or elective with at least two 300+ level courses)	3	MATH 300-400 Electives	6
Gen Ed Science & Technology	3	Related Required Course (15 credits of a minor or 2nd major or elective with at least two 300+ level courses)	3
Electives	3	Gen Ed Science & Technology	3
		Electives	3
	13-15		**16**
Total Credits: 120-122			

View NDSU equivalencies of transfer courses at: www.ndsu.edu/transfer/equivalencies

For Further Information

MAILING ADDRESS: Mathematics | NDSU Dept 2750 | PO Box 6050 | Fargo, ND 58108-6050
DEPT EMAIL: christina.fischer@ndsu.edu
DEPT LOCATION: Minard Hall 408
DEPT PHONE: (701) 231-8171
DEPT WEBSITE: www.ndsu.edu/math/