

Mathematics

University of Wisconsin-River Falls
www.uwrf.edu

At UW-River Falls, mathematics is viewed as both the foundation for the sciences and a significant field of knowledge in its own right. Our mathematics instruction is dedicated to nurturing and developing students' creative mathematical talents as problem-solvers.

Goals and Objectives

- to provide students with quality instruction that allows them to experience mathematics in such a way that they become flexible, analytical thinkers;
- to provide a climate in which mathematical literacy, the free exchange of mathematical ideas and active engagement in learning mathematics flourish.

Program and/or Curriculum UW-River Falls offers two degree programs for mathematics students. The liberal arts major is designed as a comprehensive program in mathematics for students who want to pursue professional careers in mathematics upon graduation from UW-River Falls or after further graduate study. The secondary education major was created to provide preparation for students seeking careers as high school or middle school mathematics teachers. This program includes the professional training necessary for effective teaching.

Faculty The faculty members of the mathematics department have diverse backgrounds and research interests which include: combinatorics, differential equations, mathematics education, mathematical engineering, numerical analysis, probability, and statistics. Our department provides a wide range of opportunities for students to work closely with professors on research and advanced mathematical study.

Study Opportunities and Organizations Field trips to mathematics conferences are scheduled several times each year. Students can attend to exchange research results with students and professors from other universities through discussion and formal presentations. Energy research affords students with a unique opportunity to work as assistants in applying mathematics to practical problems. Senior seminar projects provide students with valuable experiences in problem solving, research, writing reports, and making presentations. Advanced statistical study helps prepare students for work in actuarial science and related fields. Independent study can be arranged to explore mathematical topics beyond those in the standard curriculum. Campus mathematics organizations include the Math Club which organizes field trips, picnics, and informal study sessions; MAA—Mathematical Association of America which provides information on mathematical science careers, inexpensive access to undergraduate mathematics journals, and social interaction with other mathematics students; and NCTM—National Council of Teachers of Mathematics which offers opportunities to attend conferences in mathematics teaching and provides access to inexpensive professional journals.

Career Opportunities The employment outlook for mathematics majors is excellent. In 2001, the Bureau of Labor Statistics reported that the fastest growing jobs are mathematics-related. Jobs are available for mathematicians in a wide variety of industries and government agencies. Companies involving computers, insurance, aerospace, control systems, and distribution networks hire mathematicians yearly.

The careers that math majors typically follow are high quality. Recently, five of the top ten jobs rated by the Jobs Rated Almanac on characteristics such as job security, income, and satisfaction levels, were math-related.

National and international demands for workers with better mathematics preparation are resulting in increased mathematics requirements for students and improved mathematics programs at the precollege level. These are challenging, exciting, and rewarding times for mathematics teachers, and many new teachers are needed throughout the United States.



MATHEMATICS SECONDARY EDUCATION

Department of Mathematics
207 North Hall
(715) 425-3326



Bachelor of Science Degree. Academic Advising Plan.

Semester 1 (Fall)

MATH 166 Calculus I	4
General Education CW (ENGL 100)	3
General Education CS (SCTA 101)	3
General Education HF (ART 100).....	3
General Education S	3
Total semester credits	16

Semester 2 (Spring)

MATH 167 Calculus II	4
MATH 256 Linear Algebra	3
General Education CA (ENGL 200)	3
General Education SB/Global Perspectives (HIST 201) 3	
General Education HW	1
Course in minor	3
Total semester credits	17

Semester 3 (Fall)

MATH 266 Calculus III	3
TED 120 Introduction to Education and Instructional Technology	3
General Education HF (ENGL 241).....	3
General Education SL (BIOL).....	3
Course in minor	3
Total semester credits	15

Semester 4 (Spring)

MATH 236 Discrete Mathematics.....	4
PSYC 330 The Exceptional Child.....	3
TED 212 Educational Psychology	5
General Education SB (GEOG 102)	3
General Education EC (ESM 105)	3
Total semester credits	18

Semester 5 (Fall)

MATH 356 Applied Statistics.....	3
TED 252 Foundations of Multicultural Education ..	3
Mathematics 300 level elective	3
General Education MD	3
Course in minor	3
Course in minor	3
Total semester credits.....	18

Semester 6 (Spring)

MATH 326 Probability	3
MATH 351 Abstract Algebra	3
MATH 436 History of Mathematics	2
Course in minor	3
College liberal arts	3
American Cultural Diversity D	3
General education HW	5
Total semester credits.....	17.5

Semester 7 (Fall)

MATH 411 Geometry	3
TED 420 School and Society.....	3
Mathematics elective	3
General education HW	5
Course in minor	3
Course in minor	3
Total semester credits.....	15.5

Semester 8 (Spring)

MATH 305 Integrating Technology in Teaching Secondary Mathematics	3
TED 422 Content Area Literacy	3
TED 423 Writing, Speaking, Listening	3
TED 438 Techniques in Mathematics.....	3
Minor, techniques	3
Total semester credits	15

Summary of Degree Requirements

General Education	51 cr.
Major Requirements	37 cr.
Minor Program	24 cr.
Credits to Degree	143 cr.