

# Mathematics

Bachelor of Science (B.S.)

Bachelor of Science in Education (B.S.Ed.)



## Experience Mathematics!

Your future in Mathematics begins at Black Hills State University. With excellent instructors, computer-based learning systems, and opportunities to tutor in the Math Assistance Center, you will become fully prepared for a career in Mathematics. Many students go into teaching, others find employment with firms specializing in technology, health care, law, or the sciences, wherever accurate data analysis is essential.

## Prepare For Your Future

BHSU offers a rigorous program that nurtures mathematical maturity, self-confidence and an appreciation for lifelong learning. Choose a degree program that either prepares you for a career in business or industry, or for graduate school. Another option leads to a career in education at middle or high schools. The course work will give you the opportunity to develop principles, explore connections between areas of mathematics, and develop theories and techniques that model events in related fields, such as engineering and natural sciences.

## Learn From The Best

The Math faculty is devoted to making sure students succeed. The faculty members are also actively engaged in research and grant projects, such as doing statistical analysis for the Biology Department, and students are often involved in these research opportunities.

## Enjoy The Experience

You can enhance your Mathematics experience by becoming a tutor in the Math Assistance Center. The Center employs approximately 15 students each semester or become involved by joining the Math Club. The club, which is open to all BHSU students, sponsors special presentations, participates in outreach activities, and sends students to regional conferences. Members also receive a free student membership to the Mathematical Association of America (MAA). If your interest is in education, research, science or economics, a degree in Mathematics will prepare you for your career choice.

## find your career:

The thought processes of mathematics prepare you to work in many high demand fields such as:

- Software Engineering
- Business Management
- Technical Writing
- Banking
- Market Research
- Data Processing
- Statistical Processing
- Law School
- Education

## connect with us



1.800.ALL.BHSU

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# Mathematics



## Required Core .....

- 4 MATH 123 Calculus I
- 4 MATH 125 Calculus II
- 2 MATH 221 Intro: Discrete Mathematics
- 4 MATH 225 Calculus III
- 3 MATH 315 Linear Algebra
- 3 MATH 321 Differential Equations
- 3 MATH 413 Abstract Algebra I
- 3 MATH 425 Real Analysis I
- 3 MATH 481 Probability and Statistics
- 3 SEED 418 7-12 Math Methods (Teaching only)

## Math Major .....

### Restricted Electives

9- Choose 3 courses from the following:

- MATH 316 Discrete Mathematics
- MATH 361 Modern Geometry
- MATH 411 Theory of Numbers
- MATH 416 Combinatorics
- MATH 421 Complex Analysis
- MATH 440 Mathematics of Finance
- MATH 450 History of Mathematics
- MATH 461 Introduction to Topology
- MATH 487 Design of Experiments

A *minor* is required with this major plus electives are required to total 120 hours.

## Math Teaching Major .....

### Restricted Electives

6- Choose 2 courses from the following:

- MATH 316 Discrete Mathematics
- MATH 411 Theory of Numbers
- MATH 416 Combinatorics
- MATH 421 Complex Analysis
- MATH 440 Mathematics of Finance
- MATH 450 History of Mathematics
- MATH 461 Introduction to Topology
- MATH 487 Design of Experiments

### Pre-Professional Teaching Core .....

- 1 EDFN 295 Practicum: Pre-Admission Teaching
- 2 EDFN 338 Foundations of American Education
- 3 EPSY 302 Educational Psychology
- 3 ESPY 428 Child & Adolescent Development
- 3 INED 411 South Dakota Indian Studies
- 3 PSYC 101 General Psychology \*\*
- 3 SPED 405 Educating Secondary Students with Disabilities
- OR
- 3 SPED 300 Students with Exceptionalities

### Professional Secondary Ed Teaching Core .....

- 3 EDFN 365 Computer-Based Technology & Learning
- 2 MLED 480 Middle Level Methods
- 3 SEED 408 Plan, Manage & Assess the 7-12 Diverse Classroom
- 3 SEED 450 7-12 Reading & Content Literacy
- 1 SEED 495 Practicum: Pre-Student Teaching
- 3 EDFN 475 Human Relations
- 9 SEED 488 7-12 Student Teaching

A *minor* is NOT required with this major but electives are required to total 120 hours.

## General Education Requirements .....

Gen Ed - Mathematics *Satisfied by major*

Gen Ed - Social Science *9 semester hours/ 6 hours for teaching majors*

Gen Ed - Arts & Humanities *12 semester hours*

Gen Ed - Natural Science AND Lab *6-8 semester hours*

ENGL 101 - Composition I

ENGL 201 - Composition II

SPCM 101, OR SPCM 215, OR SPCM 222 *Speech*

WEL 100 - Wellness for Life AND WEL 100L Lab

\*\*Completes one general education requirement.