

Mathematics and Science Education

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



What two disciplines go hand-in-hand in education? Math and science. Black Hills State University leads the way in integrated teaching and learning of science and mathematics.

PREPARE FOR YOUR FUTURE:

BHSU focuses on providing an integrated curriculum that prepares future teachers to teach both math and science. This affords students the opportunity to become deeply immersed in the content of mathematical and scientific disciplines while learning innovative strategies to help teach the subjects. Teaching methods include classroom observations, laboratory lessons, many field experiences, and research.

LEARN FROM THE BEST:

The science faculty use hands-on learning to elevate the learning process. Take advantage of the small class size and the one-on-one attention from dedicated professors. BHSU mathematics and science faculty actively pursue funding for support of interdisciplinary research with students.

ENJOY THE EXPERIENCE:

Whatever your interest, you have a unique opportunity to be exposed to the applied sciences, which will prepare you for a career in either mathematics or the sciences. The demand is high for teachers to be certified in both math and science. Why not get certified in both?

Let your love of reasoning, inquiry, working with people propel you toward a composite degree in math and science. We deliver on our promise to prepare caring, competent, and confident professionals for the 21st century.

Call 1-800-ALL-BHSU or visit www.BHSU.edu

The BHSU Center for the Advancement of Math and Science Education (CAMSE) houses state-of-the-art materials for undergraduate students to use in learning to teach mathematics and science through a problem-solving approach.

CAREER OPTIONS:

Where you start has everything to do with what you can achieve.

Prepare for an exciting career today:

K-12 School System
Boards of Education
and much more.

Revised: 11/01/07

Composite Major in Mathematics and Science Education at BHSU

Select math and one area of science:

Earth Science

GEOL 201 Physical Geology & 201L Lab
 GEOL 203 Historical Geology & 203L Lab
 GEOL 321 Conservation of Natural Resources
 PHYS 185 Introduction to Astronomy & 185L Lab

Choose two courses from the following:

GEOL 340 Mineralogy/Petrology
 GEOL 350 Environmental Geology
 GEOL 360 Environmental Geochemistry
 GEOL 370 Hydrogeology
 SCI 388 Global Positioning & Geographical Info. Systems

Chemistry

CHEM 112 General Chemistry I & 112L Lab
 CHEM 114 General Chemistry II & 114L Lab
 CHEM 326 Organic Chemistry I & 326L Lab
 CHEM 328 Organic Chemistry II & 328L Lab
 CHEM 332 Analytical Chemistry & 332L Lab

Physics

PHYS 185 Introduction to Astronomy & 185L Lab
 PHYS 211 University Physics I & 211L Lab
 PHYS 213 University Physics II & 213L Lab
 PHYS 331 Introduction to Modern Physics
 PHYS 471 Quantum Mechanics

Biology

BIOL 151 General Biology I & 151L Lab
 BIOL 153 General Biology II 153L Lab
 BIOL 311 Principles of Ecology & 311L Lab
 BIOL 331 Microbiology & 331L Lab
 BIOL 371 Genetics & 371L Lab
 BIOL Elective

Mathematics

MATH 123 Calculus I & 123L Lab **
 MATH 125 Calculus II & 125L Lab
 MATH 225 Calculus III
 MATH 361 Modern Geometry
 MATH 481 Probability & Statistics

Choose two courses from the following:

MATH 315 Linear Algebra
 MATH 413 Abstract Algebra I
 MATH 425 Real Analysis I

Pre-Professional Teaching Core

EDFN 338 Foundations of American Education
 EDFN 395 Practicum: Pre- Admission Teaching
 EDFN 475 Human Relations
 EPSY 302 Educational Psychology
 INED 411 South Dakota Indian Studies
 PSYC 101 General Psychology **
 PSYC 422 Psychology of Adolescence
 SPED 405 Educating Secondary Students w/ Disabilities

Professional Secondary Ed Teaching Core

EDFN 365 Computer Based Technology & Learning
 MLED 480 Middle Level Methods
 SEED 408 The Professional Teacher-Secondary Only
 SEED 450 7-12 Teaching Reading in the Content Area
 SEED 488 7-12 Student Teaching
 SEED 495 Practicum: Pre-Student Teaching

Methods

SEED 413 7-12 Science Methods
 SEED 418 7-12 Math Methods

General Education Requirements

- ENGL 101 Composition I
- ENGL 201 Composition II
- SPCM 101, 215, or 222 Speech
- Social Science, minimum 2 different subject areas (9 credits)
- Arts & Humanities, minimum 2 different subject areas (12 credits)
- MATH 102 College Algebra or higher math
- Natural Science with Lab (8 credits)
- Wellness & Wellness Lab (2 credits)
- Globalization Course (3 credits)

A *minor* is NOT required with this major but electives are required to total 128 hours.

Students are encouraged to pursue a minor, but to be certified to teach, a content praxis exam must be passed in both the major & minor areas of study.

**Completes one general education requirement.