

HIGH SCHOOL DUAL CREDIT

GATEWAY TO STEM

The Gateway to STEM Certificate Program offers high school students in dual credit courses a chance to explore career-focused classes while earning college credits. This certificate provides an opportunity to engage South Dakota high school students about potential future careers in science, technology, engineering, and mathematics (STEM) fields. **View the certificate course plan and potential degree paths below!**

CERTIFICATE COURSEWORK PLAN

If you are considering a career in STEM the courses in the certificate plan below will help you explore that path.

*Completing these courses not only qualifies for an undergraduate certificate but contributes to degree progress within the featured business programs at South Dakota's public universities. Courses that comprise the certificate may count toward general education requirements, major requirements, or electives, depending on your chosen major and university.



SCIENCES

Take one of the following:

BIOL 151/151L General Biology I w/Lab

CHEM 112/112L General Chemistry I w/Lab

PHYS 207/207L Fundamentals of Physics I w/Lab

PHYS 211/211L University Physics I w/Lab

MATH

Take the following **or higher**:

MATH 114 College Algebra

PROGRAMMING

Take one of the following:

CSC 115 Test-Driven Software Development

CSC 150/L Computer Science I

CSC 170/L Programming for Engineers and Scientists

INDIVIDUAL STUDENT OUTCOMES

- Students will define a problem and apply appropriate techniques to obtain valid solutions.
- Analyze available facts, evidence, and observations and apply rational, unbiased analysis to form judgments.
- Systematically explore and investigate complex issues to develop well-supported conclusions.

*Students who do not complete the certificate coursework in high school can still earn the credential while attending a participating South Dakota public university.

POTENTIAL DEGREE PATHS

BLACK HILLS STATE UNIVERSITY

Applied Health Sciences
Biology
Chemistry
Environmental Physical Science
Exercise Science
Mathematics
Mathematics & Science Education
Physics
Pre-Professional Health Sciences

DAKOTA STATE UNIVERSITY

Artificial Intelligence
Artificial Intelligence in Organizations
Biology
Computer Information Systems
Computer Game Design
Computer Science
Cyber Operations
Digital Arts and Design
Exercise Science
Mathematics
Network and Security Administration

NORTHERN STATE UNIVERSITY

Biochemistry
Biology
Biotechnology (associate)
Chemistry
Environmental Science
Human Performance and Fitness
Mathematics
Management Information Systems
Nursing
Psychology

SOUTH DAKOTA MINES

Atmospheric & Environmental Sciences
Biology
Business Mgmt in Technology

SOUTH DAKOTA MINES

Chemistry
Geology
Mathematics
Physics
Pre-Professional Health Sciences
Science, Technology, and Society

SOUTH DAKOTA STATE UNIVERSITY

Biochemistry
Biology
Biotechnology
Chemistry – ACS Certified
Computer Science
Data Science
Ecology and Environmental Science
Exercise Science
Food Science
Geographic Information Sciences
Human Biology
Mathematics
Medical Laboratory Science
Microbiology
Nursing
Nutrition and Dietetics
Pharmaceutical Sciences/Pharmacy
Physics
Pre-Professional Health Sciences

UNIVERSITY OF SOUTH DAKOTA

Biochemistry
Biology
Chemistry
Computer Science
Medical Biology
Medical Laboratory Science
Neuroscience
Pre-Professional Health Sciences