DAKOTA DREAMS
COLLEGE AND BEYOND

HIGH SCHOOL DUAL CREDIT
GENERAL EDUCATION

ENGINEERING, MATH & TECHNOLOGY MAJORS

ARE YOU INTERESTED IN ENGINEERING, MATH OR TECHNOLOGY? VIEW THE FOLLOWING MAJORS AVAILABLE AT SOUTH DAKOTA'S PUBLIC UNIVERSITIES AND GET A HEAD START WITH HIGH SCHOOL DUAL CREDIT (HSDC).

BLACK HILLS STATE UNIVERSITY
Mathematics
Mathematics & Science Education

DAKOTA STATE UNIVERSITY
Artificial Intelligence
Business Technology
Computer Game Design
Computer Information Systems
Computer Science
Cyber Leadership and Intelligence
Cyber Operations
Mathematics
Network & Security Administration
Software Development

NORTHERN STATE UNIVERSITY
Biochemistry
Management Information Systems
Math
Math Education
Pre-Engineering

SOUTH DAKOTA MINES
Applied & Computational Mathematics
Chemical Engineering
Civil Engineering
Computer Engineering
Computer Science
Electrical Engineering
Geological Engineering
Industrial Engineering & Management
Science, Technology, & Society
Mechanical Engineering
Metallurgical Engineering
Mining Engineering
Physics

SOUTH DAKOTA STATE UNIVERSITY
Agricultural and Biosystems Engineering
Agricultural Systems Technology
Architecture
Aviation
Biotechnology
Civil Engineering
Computer Science
Concrete Industry Management
Construction Management
Data Science
Electrical Engineering
Electronics Engineering Technology
Geographic Information Sciences
Healthcare Systems Engineering
Mathematics
Mechanical Engineering
Operations Management
Physics
Precision Agriculture

UNIVERSITY OF SOUTH DAKOTA
Biology
Computer Science
Biomedical Engineering
Mathematics
Medical Biology
Medical Laboratory Science
Physics
Pre-Engineering
Sustainability
Operational Analytics

**Pre-professional programs, such as "Pre-Medical" are not majors that result in a degree. Students can supplement their chosen major with a pre-professional program to help prepare for future career goals.*

SAMPLE HSDC PLAN

If you're considering a career in engineering, math or technology, these are some General Education courses that we recommend.

General Education curriculum consists of classes in arts and humanities, communication, mathematics, natural sciences, and social sciences. All South Dakota Public Universities require students to take courses in these subjects.

WRITTEN COMMUNICATION
ENGL 101 Composition I
ENGL 201 Composition II

ORAL COMMUNICATION
CMST 101 Foundations of Communication

SOCIAL SCIENCES
POLS 100 American Government
PSYC 101 General Psychology

ARTS & HUMANITIES
ENGL 210 Intro to Literature
MUS 100 Music Appreciation

MATHEMATICS
MATH 115 Precalculus

NATURAL SCIENCES
CHEM 106/L Chemistry Survey
CHEM 108/L Chemistry Survey II

These are just suggestions. Other course options compatible with the track are found on the following page.

HIGH SCHOOL DUAL CREDIT GENERAL EDUCATION RECOMMENDATIONS FOR

ENGINEERING, MATH & TECHNOLOGY MAJORS

If you're looking to graduate college faster, it's a good idea to focus on taking only the HSDC courses that are necessary to complete your degree. If you're interested in engineering, math or technology careers, view the list of applicable general education courses below. *To view a full list of HSDC courses view Board of Regents policy 2.3.7.*

It is also important to speak with university advisors at the institution you plan to attend. They can help you determine what courses to take based on your test scores, high school preparation, and potential major.

WRITTEN COMMUNICATION

(Pick 2 courses, only ENGL 101 is required at SD Mines)

ENGL 101—Composition I
ENGL 201—Composition II
ENGL 283— Intro to Creative Writing

ORAL COMMUNICATION

CMST 101—Foundations of Communication
(Course not required at SD Mines)

SOCIAL SCIENCES

(Pick 2 courses, 1 to meet the civics requirement and the other from a different discipline)

CJUS 201—Intro to Criminal Justice
ECON 201—Principles of Microeconomics
ECON 202—Principles of Macroeconomics
EPSY 210/HDFS 210—Lifespan Development
HIST 151—United States History I*
HIST 152—United States History II*
POLS 100—American Government*
POLS 250—Intro to International Relations
PSYC 101—General Psychology
SOC 100—Intro to Sociology
SOC 150—Social Problems

**Meets civics requirement*

ARTS & HUMANITIES

(Pick 2 courses from two different disciplines)

ART 101—Intro to Fine Arts
ART 111—Drawing I
ART 121—Design I 2D
ARTH 100—Art Appreciation
ARTH 211—History of World Art I
ARTH 212—History of World Art II
ENGL 210—Intro to Literature
HIST 111—World Civilization I
HIST 112—World Civilization II
HIST 121—Western Civilization I
HIST 122—Western Civilization II
MCOM 151—Intro to Mass Communications
PHIL 100—Intro to Philosophy
PHIL 220—Intro to Ethics
REL 250—World Religions
MUS 100—Music Appreciation
THEA 100—Intro to Theatre
THEA 201—Film Appreciation

MATHEMATICS

(Pick 1 course based on placement and program)

MATH 114—College Algebra
MATH 115—Precalculus
MATH 120—Trigonometry
MATH 123—Calculus I
MATH 125—Calculus II
MATH 281/STAT 281—Intro to Statistics

In most cases, it is best for students to exhaust the math curriculum at their high school before moving on to Dual Credit. By gaining basic skills in calculus/trigonometry, students will be better prepared for the coursework they will be required to take.

NATURAL SCIENCES

(Pick 2 courses, minimum 6 credits)

BIOL 101/L—Biology Survey I & Lab
BIOL 103/L—Biology Survey II & Lab
BIOL 151/L—General Biology I & Lab
BIOL 153/L—General Biology II & Lab
CHEM 106/L—Chemistry Survey & Lab
CHEM 107/L—Organic & Biochemistry Survey & Lab
CHEM 108/L—Organic & Biochemistry & Lab
CHEM 112/L—General Chemistry I & Lab
CHEM 114/L—General Chemistry II & Lab
PHYS 111/L—Intro to Physics I & Lab
PHYS 113/L—Intro to Physics II & Lab
PHYS 211/L—University Physics I & Lab
PHYS 213/L—University Physics II & Lab
PHYS 185/L—Intro to Astronomy I & Lab
PHYS 187/L—Intro to Astronomy II & Lab

Consulting university advisors is critical for determining which science sequence will be best for your desired major. Sciences courses should be completed in sequence. Often, students considering science-based majors are better served by taking lab science courses face-to-face in an actual lab, dual credit may not be the best option.