MAJORS FOR
STUDENTS EXPLORING DEGREES IN
ENGINEERING, TECHNOLOGY & MATH

Are you interested in engineering, technology or math? Here is a list of available majors at SDBOR institutions.

BLACK HILLS STATE UNIVERSITY

- Engineering Technology
- Exercise Science
- Mathematics
- Mathematics & Science Education

DAKOTA STATE UNIVERSITY

- Biology for Information Systems
- Business Technology
- Computer Game Design
- Computer Science
- Cyber Operations
- Information Systems
- Mathematics for Information Systems
- Network and Security Administration

NORTHERN STATE UNIVERSITY

- Mathematics
- Mathematics Education
- Pre-Engineering

SOUTH DAKOTA SCHOOL OF MINES & TECHNOLOGY

- Applied and Computational Mathematics
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Computer Science
- Electrical Engineering
- Geological Engineering
- Industrial Engineering and Engineering Management
- Science, Technology, and Society
- Mechanical Engineering
- Metallurgical Engineering
- Mining Engineering
- Physics

SOUTH DAKOTA STATE UNIVERSITY

- Agricultural and Biosystems Engineering
- Agricultural Systems Technology
- Aviation
- Biotechnology
- Civil Engineering
- Computer Science
- Electrical Engineering
- Electronics Engineering Technology
- Mathematics
- Mechanical Engineering
- Operations Management
- Precision Agriculture

THE UNIVERSITY OF SOUTH DAKOTA

- Biology
- Computer Science
- General Studies
- Biomedical Engineering (Integrated Science)
- Mathematics
- Medical Biology
- Medical Laboratory Science
- Physics
- Pre-Engineering
- Sustainability
- Operational Analytics
COURSE RECOMMENDATIONS FOR
STUDENTS EXPLORING DEGREES IN
ENGINEERING, TECHNOLOGY & MATH

Reduce the time to graduation by only taking the courses necessary to complete a degree. Below are a few recommended courses for students exploring careers in engineering, technology, or math. These are to be viewed as suggestions; other course options compatible with this track are listed on page 3.

Consult university advisors at the university you plan to attend for appropriate placement based on test scores, high school preparation & potential major.

ENGL 101—Composition I
ENGL 201—Composition II
SPCM 101—Fundamentals of Speech
PSYC 101—General Psychology
POLS 100—American Government OR SOC 100—Introduction to Sociology
ENGL 210—Introduction to Literature
MUS 100—Music Appreciation

MATH 120—Trigonometry OR MATH 115—Precalculus OR MATH 281/STAT 281—Introduction to Statistics (or appropriate math course based on placement)

CHEM 106/L—Chemistry Survey & Lab OR CHEM 112/L—General Chemistry I & Lab
CHEM 107/L—Organic & Biochemistry Survey & Lab
CHEM 108/L—Chemistry Survey II & Lab OR CHEM 114/L—General Chemistry II & Lab (after completing CHEM 106)

Requirement for some majors. (See page 3)

In most cases, it is best for high school students to exhaust the math curriculum at their high school before moving on to dual credit math courses.

Sciences courses should be completed in sequence. Often, students looking to major in science-based majors are better served by taking lab science courses face-to-face in an actual lab, so dual credit may not be the best option for some students.

Depending upon the field and school, the natural science requirements for degree programs may vary. It is recommended that students confirm what courses are needed to complete their desired degree.

These course recommendations fulfill the following general education requirements:

Written Communication  Oral Communication  Social Sciences  Arts & Humanities  Mathematics  Natural Sciences
COURSE OPTIONS FOR
STUDENTS EXPLORING DEGREES IN
ENGINEERING, TECHNOLOGY & MATH

Reduce the time to graduation by only taking the courses necessary to complete a degree. Below is a list of possible courses to fulfill general education requirements for students exploring careers in engineering, technology, or math. Consult university advisors at the university you plan to attend for appropriate placement based on test scores, high school preparation & potential major.

**Goal #1: Written Communication (Students must take two courses, including ENGL 101)**
- ENGL 101—Composition I (If attending SDSMT, only ENGL 101 is needed)
- ENGL 201—Composition II
- ENGL 283—Introduction to Creative Writing

**Goal #2: Oral Communication**
- SPCM 101—Fundamentals of Speech  (Course not needed if attending SDSMT)

**Goal #3 Social Sciences (Pick 2 courses from two different disciplines.)**
- CJUS 201—Introduction 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—World Politics
- PSYC 101—General Psychology
- SOC 100—Introduction to Sociology
- SOC 150—Social Problems

**Goal #4: Arts & Humanities (Pick 2 courses from two different disciplines)**
- 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—Introduction 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 220—Introduction to Ethics*
- REL 250—World Religions
- GFA 101—Introduction to Fine Arts
- MUS 100—Music Appreciation
- THEA 100—Introduction to Theatre
- THEA 201—Film Appreciation

**Goal #5: Mathematics**
- MATH 102—College Algebra (or appropriate math course based on placement)
- MATH 115—Pre-Calculus
- MATH 120—Trigonometry
- MATH 123—Calculus I
- MATH 125—Calculus II
- MATH 281/STAT 281—Introduction to Statistics

In most cases, it is best for high school students to exhaust the math curriculum at their high school before moving on to Dual Credit math courses. By gaining basic skills in upper-level high school courses such as calculus/trigonometry, students will be better prepared.

**Goal #6: Natural Sciences (Students will need at least 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 112/L—General Chemistry I & Lab
- CHEM 114/L—General Chemistry II & Lab
- ESCI 101/L—Dynamic Earth & Lab
- ESCI 103/L—Earth and Life Through Time & Lab
- PHYS 101/L—Survey of Physics & Lab
- PHYS 111/L—Introduction to Physics I & Lab
- PHYS 113/L—Introduction to Physics II & Lab
- PHYS 211/L—University Physics I & Lab
- PHYS 213/L—University Physics II & Lab
- PHYS 185/L—Introduction to Astronomy I & Lab
- PHYS 187/L—Introduction 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 looking to major in science-based majors are better served by taking lab science courses face-to-face in an actual lab, so dual credit may not be the best option for some students.