

# Pre-Engineering & Computer Science Transfer Guide

South Dakota School of Mines and Technology is a distinguished public university nestled in Rapid City, SD, dedicated to equipping students for success in science and engineering. For nearly two decades, South Dakota Mines has proudly held the title of "America's Best College Buys," emphasizing our exceptional return on investment. Nearly all of our students find employments in their chosen career field or are accepted to graduate programs upon completion of their degrees.

This guide is designed to support students considering a transfer to South Dakota Mines. There may be additional courses at your community college that align seamlessly with our programs. We strongly recommend staying in touch with us throughout your transfer process to ensure a smooth transition and verify the transferability of your courses. Your journey to success starts here!

## General transfer guidelines:

- Save the syllabi for your courses- they may be required to evaluate your transfer credit.
- You do not need to complete all the courses listed here before transferring.

## Core Pre-Engineering and Computer Science Courses:

- MAT 211 Calculus I
- MAT 217 Calculus II
- MAT 220 Calculus III
- CHM 166 General Chemistry I + Lab
- ENG 105 English Composition I
- ENG 106 English Composition II
- SPC 112 Public Speaking
- 6 credits of Social Sciences
- 6 credits of Humanities
- PHY 210 Classical Physics I + Lab (Calculus-based)

You may want to consider taking some specialized courses toward your major requirements, in addition to these core courses. Additional potential transfer courses are listed by major in the next column.

## Biomedical Engineering:

- MAT 227 Differential Equations with Laplace
- BIO 112 General Biology I+ Lab
- CHM 176 General Chemistry II + Lab
- BIO 168 Human Anatomy/physiology I

## Chemical Engineering:

- MAT 227 Differential Equations with Laplace
- CHM 176 General Chemistry II + Lab
- PHY 220 Classical Physics II (Calculus-based)

## Civil Engineering:

- MAT 227 Differential Equations with Laplace
- CHM 176 General Chemistry II + Lab

## Computer Engineering:

- ELT 196 Circuit Analysis I
- MAT 227 Differential Equations with Laplace
- PHY 220 Classical Physics II (Calculus-based)

## Computer Science:

- Computer science sequence must be taken through South Dakota Mines CSC 115, 215, 315

## Electrical Engineering:

- ELT 196 Circuit Analysis I
- MAT 227 Differential Equations with Laplace
- PHY 220 Classical Physics II (Calculus-based)

## Geological Engineering:

- CHM 176 General Chemistry II + Lab
- MAT 227 Differential Equations with Laplace
- PHY 220 Classical Physics II (Calculus-based)

## Industrial Engineering & Engineering Management:

- MAT 227 Differential Equations with Laplace
- PHY 220 Classical Physics II (Calculus-based)
- PSY 111 Introduction to Psychology

## Mechanical Engineering:

- MAT 227 Differential Equations with Laplace
- PHY 220 Classical Physics II (Calculus-based)

## Metallurgical Engineering:

- CHM 176 General Chemistry II + Lab
- MAT 227 Differential Equations with Laplace
- PHY 220 Classical Physics II (Calculus-based)

## Mining Engineering:

- MAT 227 Differential Equations with Laplace
- ECN 120/130 Principles of Economics (Macro- or Micro-)

## Contact us:

transfer@sdsmt.edu  
605.394.2414

## Visit:

sdsmt.edu/visit

## Apply

sdsmt.edu/apply

# Science, Pre-Med & Business Transfer Guide

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## General transfer guidelines:

- Save the syllabi for your courses- they may be required to evaluate your transfer credit.
- You do not need to complete all the courses listed here before transferring.

## Core Science, Pre-Med, and Business Courses:

MAT 211 Calculus I

MAT 217 Calculus II

MAT 220 Calculus III

*\*Mathematics students may take General Chemistry + Lab or General Biology + Lab*

CHM 166 General Chemistry I + Lab

ENG 105 English Composition I

ENG 106 English Composition II

SPC 112 Public Speaking

6 credits of Social Sciences

6 credits of Humanities

PHY 210 Classical Physics I + Lab (Calculus-based)

You may want to consider taking some specialized courses toward your major requirements, in addition to these core courses. Additional potential transfer courses are listed by major in the next column.

## Biology:

- BIO 112 General Biology I + Lab
- BIO 113 General Biology II + Lab
- BIO 168 Human Anatomy/physiology I
- CHM 176 General Chemistry II + Lab
- PHY 210 Classical Physics I (Calculus-based)
- PHY 220 Classical Physics II (Calculus-based)

## Atmospheric Sciences:

- MAT 220 Calculus III
- MAT 227 Differential Equations with Laplace
- BIO 112 General Biology I+ Lab
- CHM 176 General Chemistry II + Lab
- PHY 210 Classical Physics I (Calculus-based)
- PHY 220 Classical Physics II (Calculus-based)

## Business Management in Technology:

- ECN 130 Principles of Microeconomics

## Chemistry:

- MAT 227 Differential Equations with Laplace
- CHM 176 General Chemistry II + Lab
- PHY 210 Classical Physics I (Calculus-based)
- PHY 220 Classical Physics II (Calculus-based)

## Geology:

- CHM 176 General Chemistry II + Lab
- PHY 210 Classical Physics I (Calculus-based)
- PHY 220 Classical Physics II (Calculus-based)

## Mathematics:

- MAT 220 Calculus III
- MAT 227 Differential Equations with Laplace
- BIO 112 General Biology I+ Lab OR
- CHM 176 General Chemistry II + Lab
- PHY 210 Classical Physics I (Calculus-based)
- PHY 220 Classical Physics II (Calculus-based)

## Pre-Med:

- BIO 168 Human Anatomy/physiology I
- MAT 157 Statistics
- BIO 112 General Biology I + Lab
- BIO 113 General Biology II+ Lab
- CHM 176 General Chemistry II + Lab

## Physics:

- MAT 220 Calculus III
- MAT 227 Differential Equations with Laplace
- PHY 210 Classical Physics I (Calculus-based)
- PHY 220 Classical Physics II (Calculus-based)

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<b>Iowa Western Community College</b>	<b>South Dakota Mines</b>
<i>Communications (9 credits)</i>	
ENG 105 Composition I - 3	ENGL 101 Composition I - 3
ENG 106 Composition II-3	ENGL 201 Composition II -3
SPC 112 Public Speaking- 3	CSMT 215 Public Speaking -3
<i>Arts &amp; Humanities (9 credits with Social Science) SDSMT requires 6 credit</i>	
ART 101 Art Appreciation- 3	ARTH 100 Art Appreciation - 3
LIT 101 Introduction to Literature-3	ENGL 210 Introduction to Literature I- 3
HIS 110 Western Civilization I -3	HIST 121 Western Civilization I -3
PHI 101 Introduction to Philosophy - 3	PHIL 100 Intro to Philosophy -3
<i>Social Sciences (9 credits with Humanities) SDSMT requires 6 credits</i>	
PSY 111 General Psychology - 3	PSYC 101 General Psychology - 3
SOC 110 Introduction to Sociology - 3	SOC 100 Introduction to Sociology - 3
ECN 130 Principles of Microeconomics- 3	ECON 201 Principles of Microeconomics- 3
<i>Math</i>	
MAT 211 Calculus I - 5	MATH 123 Calculus I - 4
MAT 217 Calculus II -5	MATH 125 Calculus II - 4
MAT 220 Calculus III - 5	MATH 225 Calculus III- 4
MAT 227- Elementary Differential Equations with Laplace- 4	MATH 321 Differential Equations- 3
<i>Science</i>	
BIO 112 General Biology I/ Lab-5	BIOL 151 General Biology/ Lab-4
BIO 113 General Biology II I / Lab - 5	BIOL 153 General Biology I / Lab - 4
CHM 166- General Chemistry I/Lab - 5	CHEM 112 General Chemistry I/Lab - 4
CHM 176 General Chemistry II/ Lab - 5	CHEM 114 General Chemistry II/Lab - 4
PHY 210 Classical Physics/ Lab -5	PHYS 211 University Physics I / Lab 4
PHY 221 Classical Physics II/ Lab -5	PHYS 213 University Physics II / Lab 4
<i>Engineering Courses</i>	
EGR 100 Engineering Orientation	GES 130 Introduction to Engineering & Science/ Lab
EGR 160 Engineering I	ME 126L Design for Manufacturing
EGR 165 Engineering II	Free elective