

# Associate to Bachelors (A2B) Articulation Agreement

## Prescribed Curriculum: Gillette College

### Associate of Science – Engineering (Industrial)

General Education Courses			27 CREDIT HOURS
	Credit Hours	Community College Course No.	Course Title or Category
Science	4	CHEM 1020	General Chemistry I
Mathematics	4	MATH 2200	Calculus I
Cultural Studies	3	Select 1 course from	Cultural Studies “Global Diversity” or “Foreign Language” categories
	3	PSYC 1000	General Psychology
US & WY Constitutions	3	HIST 1211, or 1221, or 1251, or POLS 1000	US to 1865, or US from 1865, or Wyoming History, or American and Wyoming Government
Communication	3	ENGL 1010	English Composition I
	3	COMM 2010	Public Speaking
Gen Ed Course of Choice	4	MATH 2205	Calculus II

Required Courses			18 CREDIT HOURS
	Credit Hours	Course No.	Course Title
Mathematics & Science	4	MATH 2210	Calculus III
	3	MATH 2310	Applied Differential Equations
	4	PHYS 1310	College Physics I
Engineering	1	ES 1000	Orientation of Engineering
	3	ES 2110	Statics
	3	ES 2120	Dynamics

Program Elective Courses			20 CREDIT HOURS
	Credit Hours	Course No.	Course Title
ES/PHYS Elective	4	PHYS 1320	College Physics II
Program Elective	3	MATH 2250	Linear Algebra
	4	Select 1 course from	GEOL 1100 (Physical Geology), CHEM 1030 (General Chemistry II)
	3	ES 2330	Fluid Dynamics
	3	ES 2410	Mechanics of Materials
	3	ES 1060	Introduction to Engineering Problem Solving

**Associate of Science – Engineering (Industrial) Total: 65 CREDIT HOURS**

## Post-Associate Degree Prescribed Curriculum: South Dakota Mines

### Bachelor of Science – Industrial Engineering and Engineering Management

General Education Courses			6 CREDIT HOURS
	Credit Hours	Community College Course No.	Course Title or Category
<b>Written Communication</b>	3	ENGL 289	Explorations in STEM Communications
<b>Arts &amp; Humanities</b>	3	Select 1 course from	General Education Arts and Humanities (Goal 4)

Major Required Courses			56 CREDIT HOURS
	Credit Hours	Course No.	Course Title
<b>Industrial Engineering</b>	2	IENG 248/248L	Engineering Graphics and Computer Modeling w/ Lab
	3	IENG 381	Introduction to Probability and Statistics
	3	IENG 215	Cost Estimating for Engineers
	3	IENG 382	Probability Theory and Statistics II
	3	IENG 302	Engineering Economics
	3	IENG 311/311L	Work Methods and Measurements w/lab
	1	IENG 352	Creativity and Innovation
	1	IENG 354	Marketing Technology Innovations
	3	IENG 362	Stochastic Models
	3	IENG 486	Statistical Quality and Process Control
	3	IENG 321/321L	Ergonomics/Human Factors Engineering w/lab
	1	IENG 355	Financing Technology Innovations
	3	ENGM 435	Optimization Techniques
	3	IENG 441	Simulation
	3	IENG 425	Production and Operation Management
	3	IENG 464	Senior Design Project I
	3	IENG 471	Facilities Planning
	3	Select 1 course from	IENG 331 Safety Engineering and IENG 431 Industrial Hygiene
	3	IENG 366	Engineering Management
3	IENG 465	Senior Design Project II	
3	IENG 475/475L	Computer-Controlled Manufacturing Systems & Robotics w/lab	

Elective Courses			3 CREDIT HOURS
	Credit Hours	Course No.	Course Title
<b>Electives</b>	3	Select from list	Department Approved Electives

**Post-Associate Degree Total: 65 CREDIT HOURS**

**Bachelor of Science – Industrial Engineering and Engineering Management Total: 130 CREDIT HOURS**

# A2B Articulation Agreement Guarantees & Limitations

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## GUARANTEES

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Students who:

1. complete the Associate of Science - Engineering degree prescribed curriculum at Gillette College exactly as it is identified in this articulation agreement, **and**
2. have the degree conferred on their education record at Gillette College (post high school graduation), **and**
3. earn a minimum cumulative grade point average (GPA) of 2.75 at the Gillette College, **and**
4. pass all 65 credits for the associate degree, earning a grade C- or higher in each course

are **guaranteed** the following at the South Dakota School of Mines and Technology (South Dakota Mines):

1. junior standing at South Dakota Mines with no more than 65 remaining credits to meet the graduation requirements for the Bachelor of Science degree in Industrial Engineering and Engineering Management.
2. admission to South Dakota Mines
3. admission to the Bachelor of Science degree in Industrial Engineering and Engineering Management.

## LIMITATIONS

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1. This agreement is between the Associate of Science - Engineering degree at Gillette College and the Bachelor of Science degree in Industrial Engineering and Engineering Management at South Dakota Mines only.
2. Students must meet all admission and application requirements at South Dakota Mines, including the submission of all required documentation by stated deadlines. Students are advised to contact the Office of Admissions at the South Dakota Mines early in their transfer planning.
3. Student must have a cumulative grade point average (GPA) at the Gillette College of 2.75 or higher **and** only courses with grades of C- or higher are guaranteed to be accepted in transfer by South Dakota Mines.
4. The credit and course transfer guarantees described in this agreement apply to the Associate of Science degree at Gillette College and the Bachelor of Science degree in Industrial Engineering and Engineering Management at South Dakota Mines. If the student changes majors at Gillette College or at South Dakota Mines, the student is no longer covered by this Articulation Agreement and none of the Guarantees of the Agreement apply.
5. Students utilizing any form of transfer credit, including but not limited to credit awarded from other higher education institutions, standardized exam (CLEP, AP, DSST, etc.), prior learning assessment (military, certifications, ACE recommended credit, portfolio, challenge exam, work experience equivalent credit, etc.) to satisfy any Associate degree requirements will have those credits evaluated by South Dakota Mines. Should South Dakota Mines not accept the transfer credits accepted by Gillette College, the student will be required to make up the credit deficiency at South Dakota Mines.
6. No course substitutions are allowed for the courses listed in the Prescribed Curriculum for the associate degree at Gillette College.

## A2B CONTACT INFORMATION

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South Dakota Mines  
Office of the Provost  
605.394.2256  
[Provost@sdsmt.edu](mailto:Provost@sdsmt.edu)

Gillette College  
Academic & Student Affairs  
307.681.6000  
[admissions@gillettecollege.org](mailto:admissions@gillettecollege.org)


## RENEWAL, REVISION, and TERMINATION

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1. This Associate to Bachelor Articulation Agreement (A2B) shall be in effect July 1 – June 30 each year and will automatically renew annually unless action is taken by South Dakota Mines or Gillette College to terminate or modify it.
2. The South Dakota Mines Office of the Provost and the Gillette College Academic & Student Affairs department will collaborate to coordinate a review the content of the associate and bachelor degrees on a three-year cycle to ensure this A2B is still appropriate.
3. South Dakota Mines and the Gillette College each reserve the right to seek revision of this agreement at any time.
4. Revision of any content of the agreement (except Appendices content) will be approved by each institution and result in a new agreement being signed, with copies retained by each institution.
  - a. Revision to any Appendices will be communicated to each institution, but do not need to be approved by each institution and will not result in a new agreement being signed by each institution.
5. South Dakota Mines and the Gillette College each reserve the right to seek termination of this agreement at any time.
6. Should the agreement be terminated, each institution agrees to collaborate and engage in appropriate plans to notify and work with impacted students, providing a minimum one-year advance notice of termination.

## APPROVALS

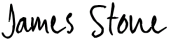
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DocuSigned by:  
  
F8ACCB3DDD0E4F...  
Lance Roberts, Ph.D.  
Interim President  
South Dakota Mines  
[President@sdsmt.edu](mailto:President@sdsmt.edu)


1/22/2025  
Date

Signed by:  
  
FE69AB9DF58D4CF...  
Janell Oberlander, Ed.D.  
President  
Gillette College  
[JOberlander@gillettecollege.org](mailto:JOberlander@gillettecollege.org)

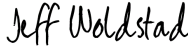
1/17/2025  
Date

DocuSigned by:  
  
B778F3414284DA...  
James Stone, Ph.D.  
Interim Provost and Vice President for Academic Affairs  
South Dakota Mines  
[Provost@sdsmt.edu](mailto:Provost@sdsmt.edu)

1/21/2025  
Date

Signed by:  
  
05AFE3E518964D3...  
Barry Spriggs, Ph.D.  
Vice President for Academic and Student Affairs  
Gillette College  
[BSpriggs@gillettecollege.org](mailto:BSpriggs@gillettecollege.org)

1/14/2025  
Date

Signed by:  
  
38931A170C614A0...  
Jeffrey Woldstad, Ph.D.  
Department Head  
South Dakota Mines  
[Jeff.Woldstad@sdsmt.edu](mailto:Jeff.Woldstad@sdsmt.edu)

1/21/2025  
Date

Signed by:  
  
1FB80B279ED64FE...  
Martin Fashbaugh  
Dean of Arts and Sciences  
Gillette College  
[MFashbaugh@gillettecollege.org](mailto:MFashbaugh@gillettecollege.org)

12/19/2024  
Date

## **Appendix A: Course Sequence**

## Course Sequence: Gillette College

### Engineering - Industrial (A.S.)

Semester	Course No.	Course Title	Credit Hours	Completed
Freshman Year First Semester	MATH 2200	Calculus I	4	
	CHEM 1020	General Chemistry I	4	
	ES 1000	Orientation of Engineering	1	
	ENGL 1010	English Composition	3	
	ES 1060	Intro to Engineering Problem Solving (Program Elective)	3	
<i>Total Credits</i>			<b>15</b>	

Semester	Course No.	Course Title	Credit Hours	Completed
Freshman Year Second Semester	COMM 2010	Public Speaking (Advanced Writing)	3	
	Select 1 course from	CHEM 1030 or GEOL 1100 (Program Elective)	4	
	ES 2110	Statics	3	
	MATH 2205	Calculus II	4	
	PHYS 1310	College Physics I	4	
<i>Total Credits</i>			<b>18</b>	

Semester	Course No.	Course Title	Credit Hours	Completed
Sophomore Year First Semester	MATH 2210	Calculus III	4	
	ES 2120	Dynamics	3	
	PHYS 1320	College Physics II	4	
	PSYC 1000	General Psychology	3	
	ES 2410	Mechanics of Materials	3	
<i>Total Credits</i>			<b>17</b>	

Semester	Course No.	Course Title	Credit Hours	Completed
Sophomore Year Second Semester	MATH 2310	Applied Differential Equations	3	
	Select 1 course from:	Cultural Studies: Foreign Language or Global Diversity areas	3	
	Select 1 course from:	HIST 1211, HIST 1221, HIST 1251, POLS 1000 (US/WY Const)	3	
	MATH 2250	Elementary Linear Algebra (Program Elective)	3	
	ES 2330	Fluid Dynamics (Program Elective)	3	
<i>Total Credits</i>			<b>15</b>	

<b>General Education Coursework Total:</b>		<b>27 credit hours</b>
<b>Major and Elective Coursework Total:</b>		<b>38 credit hours</b>
<b>Gillette College Coursework Total:</b>		<b>65 CREDIT HOURS</b>

## Course Sequence: South Dakota Mines – Fall Semester Start

### Industrial Engineering and Engineering Management (B.S.)

Semester	Course No.	Course Title	Credit Hours	Completed
Junior Year First Semester - FALL	IENG 248/248L	Engineering Graphics and Computer Modeling w/Lab	2	
	IENG 381	Introduction to Probability & Statistics	3	
	IENG 352	Creativity and Innovation	1	
	IENG 311/311L	Work Methods and Measurements w/lab	3	
	IENG 354	Marketing Technology Innovations	1	
	IENG 331	Safety Engineering	3	
	ENGL 289	Explorations in STEM Communication (Goal 1)	3*	
<b>Total Credits</b>			<b>16</b>	

Semester	Course No.	Course Title	Credit Hours	Completed
Junior Year Second Semester - SPRING	IENG 302	Engineering Economics	3	
	IENG 382	Introduction to Probability & Statistics II	3	
	IENG 215	Cost Estimating	3	
	IENG 321/321L	Ergonomics/Human Factors Engineering w/lab	3	
	IENG 441	Simulation	3	
<b>Total Credits</b>			<b>15</b>	

Semester	Course No.	Course Title	Credit Hours	Completed
Senior Year First Semester - FALL	IENG 362	Stochastic Models	3	
	ENGM 435	Optimization Techniques	3	
	IENG 464	Senior Design Project I	3	
	IENG 425	Production and Operation Management	3	
	IENG 486	Statistical Quality and Process Control	3	
	IENG 471	Facilities Planning	3	
<b>Total Credits</b>			<b>18</b>	

Semester	Course No.	Course Title	Credit Hours	Completed
Senior Year Second Semester - SPRING	IENG 355	Financing Technology Innovations	1	
	IENG 465	Senior Design Project II	3	
	IENG 366	Engineering Management	3	
	IENG 475/475L	Computer-Controlled Manufacturing Sys & Robotics w/lab	3	
		Department Approved Electives	3	
	Select 1 course from	Arts/Humanities Gen Ed Elective (Goal 4)	3*	
<b>Total Credits</b>			<b>16</b>	

\*General Education Coursework Total: 6 credit hours

Major and Elective Coursework Total: 59 credit hours

**South Dakota Mines Coursework Total: 65 CREDIT HOURS**