South Dakota State University Augustana University

# Agreement

# For An Articulated Agreement for Dual Degree Programs (B.A., B.S.) Between South Dakota State University and Augustana University

### I. INTRODUCTION

South Dakota State University and Augustana University desire to establish a dual degree program leading to the Bachelor of Arts (B.A.) degree from Augustana University and the Bachelor of Science from South Dakota State University. Each student enrolled in the Program will be required to attend Augustana University for at least three (3) years and complete the requirements for the student's intended major of either Math or Physics. After completing the academic requirements of Augustana University, the student shall transfer to South Dakota State University and complete the requirements for a Bachelor of Science in either Civil and Environmental Engineering or Mechanical Engineering (See Attachments 2 through 5). When completed, each student in the Program shall be awarded the appropriate degree from each respective institution. This Agreement applies to students enrolling at Augustana University in Fall 2020 and thereafter.

### **Objectives of the Agreement**

- 1. To leverage the two institutions' proximity to each other by developing a partnership between SDSU and AU to create options for Augustana students that currently do not exist.
- 2. To facilitate the transfer of students from AU to SDSU.
- 3. To provide specific advisement for AU students who intend to pursue a degree in Civil and Environmental Engineering or Mechanical Engineering from SDSU.
- 4. To encourage academic and administrative coordination between the two institutions, thereby exchanging outcome information of the programs with the goal of continuous improvement.
- 5. To provide qualified AU students the opportunity to complete the BA degree in Math or Physics from AU and a BS degree Civil and Environmental Engineering or Mechanical Engineering from SDSU.

### II. PROCEDURES

- 1. Under the provisions of this agreement AU students will matriculate a minimum of 58 credits to SDSU.
- 2. While at AU and SDSU, students will complete all the required courses as outlined in the attachments.

Jerome J. Lohr College of Engineering Department of Physics & Mathematics

South Dakota State University Augustana University

- 3. Each student enrolled in the program will pay tuition and fees directly to Augustana University while enrolled in courses there. Upon admission to the program at South Dakota State University, the enrolled student will pay tuition and fees directly to SDSU for the remaining semesters of the program. Each institution is solely responsible for setting its own tuition and fee rates.
- 4. This program is sequential. Students who are eligible may request financial aid through the school in which they are enrolled at the time. It is only during the time students are enrolled at each institution that the respective financial aid offices will be responsible for monitoring such eligibility and processing awards. Any withdrawn student receiving federal student aid will be subject to federal regulations as it relates to the return of any unearned federal student aid.
- 5. Applicants must be able to demonstrate that all prerequisite course requirements have been met.
- 6. Augustana University and South Dakota State University reserve the right to change, without notice, policies including but not limited to housing and financial aid. Any changes to student policies will be communicated annually.
- 7. South Dakota State University and Augustana University will comply with all laws and regulations relating to this Agreement, including but not limited to Title IX which prohibits discrimination in any federally funded education program or activity and any other applicable federal, state and local laws prohibiting discrimination against protected classes.
- 8. Augustana University students will be required to submit all application materials to the Office of Undergraduate Admissions at South Dakota State University by the application deadline set by South Dakota State University's Office of Undergraduate Admissions. International students should contact both the Augustana and South Dakota State University Offices of International Affairs to coordinate the transfer of their Student & Exchange Visitor Information System (SEVIS) record (Form I-20).
- 9. The applicants must have been full-time students at Augustana University for at least two years before applying to South Dakota State University. If a student has attended more than one school, submission of all transcripts will be required and a final GPA will be recalculated based on all grades. Unless otherwise approved, students will complete all major and core requirements of Augustana University before entering South Dakota State University.
- 10. The applicant must declare an engineering major in either Civil and Environmental Engineering (CEE) or Mechanical Engineering (ME) at the time of application to South Dakota State University.
- 11. Each pre-requisite course must be taken at Augustana University; courses taken at other institutions or credit awarded by advanced placement, equivalency or individual testing will be accepted as fulfillment of prerequisite coursework as long as the course credit appears on the transcript issued by Augustana University.
- 12. Any notice or other communication required or permitted to be given or made under this Agreement shall be sufficient if in writing and shall be considered given when mailed by certified mail, return receipt requested, to the parties at their respective addresses.

Jerome J. Lohr College of Engineering Department of Physics & Mathematics

South Dakota State University Augustana University

### III. MUTUAL PROMOTION OF THE PROGRAM

AU and SDSU both agree to encourage qualified students to participate in this dual degree program through advisement and information dissemination. The AU program liaison will maintain a list of students pursuing the program with the intent to enroll at SDSU and will periodically inform the appropriate SDSU liaison to facilitate necessary communication with the SDSU Admissions Office.

### IV. STUDENT ADVISING

The AU program liaison is responsible for advising students regarding their academic preparation for admission to SDSU while in attendance at AU. Similarly the SDSU program liaison will be responsible for facilitating the advisement of students during their first year at SDSU to ensure necessary transferrable course are completed.

### V. CONTNUATION AND TERMINATION OF THE AGREEMENT

This agreement shall be in force until either institution makes a decision in writing to terminate the agreement. It is agreed that if terminated, both institutions will hone the terms of the agreement until all students already matriculated at SDSU are given the opportunity to complete the program in a timely manner. Termination becomes effective on the first day of July following the written notice of termination; this will enable any qualified AU student who completes the AU portion of the requirements of this agreement prior to the effective date of termination, July 1, to be admitted into the SDSU program in the fall semester immediately following the effective termination date.

### VI. PROGRAM CHANGES

As program graduation requirements change at either institution, this agreement will be updated by communicating the changes in the form of revision of the attachments to this agreement and will not, in and of itself, require revision of the agreement. The communication of curricular changes will occur in a timely manner to enable either institution a chance to review the changes and decide if they are significant enough to warrant revising or terminating the agreement.

Jerome J. Lohr College of Engineering Department of Physics & Mathematics South Dakota State University Augustana University

Augustana University and South Dakota State University have executed this Agreement, each with the intent of being legally bound hereby, effective as (date).

AUGUSTANA UNIVERSITY

Provost and Executive Vice President Academic Affairs

#### SOUTH DAKOTA STATE UNIVERSITY

awer

Dean, Jerome J. Lohr

Date: 8.31.2020

Provost and VP for Academic Affairs Date: 8-3 - 2020

Jerome J. Lohr College of Engineering Department of Physics & Mathematics

South Dakota State University Augustana University

### ATTACHMENT 1 - Dual Degree Engineering Program 3-2

### AUGUSTANA UNIVERSITY COURSE REQUIREMENTS

Course Requirements	PHYSICS	PHYSICS*	MATH	MATH*
FYS 110 - First Year Seminar	4	4	4	4
FYS 111 – First Year Seminar	4	4	4	4
CHEM 116 – Gen Chem I	4	4	4	4
CHEM 117 – Gen Chem II	4	4	4	4
COSC 210 - Computer Science I			4	4
MATH 151- Calc I	4		4	
MATH 152 – Calc II	4	4	4	4
MATH 153 – Calc III	3	3	3	3
MATH 200 – Fund of Math			3	3
MATH 220 – Linear Algebra			3	3
MATH 310 – Diff Equations	3	3	3	3
MATH 315 – Prob/Stats	3	3	3	3
MATH 320 – Discrete Structures				3
MATH 340/350 – Abstract Real	6		6	6
MATH 490 – Senior Seminar			1	1
MATH - Elective 1			3	3
PHYS 221 – Gen Phys I	4	4	4	4
PHYS 222 – Gen Phys II	4	4	4	4
PHYS 281 – Inter Lab	3	3		
PHYS 321 – Comp Physics	3	3		
PHYS 371 – Modern Physics	3	3		
PHYS 381 – Advanced Lab	3	3		
PHYS – Elective 1	3	3		
PHYS – Elective 2	3	3		
PHYS – Elective 3	3	3		
STATICS	3	3	3	3
12 SOPHIA GENERAL ED COURSES	36	36	36	36
Total Credits	107	97	97	96

### \*CALC | COMPLETED

See Attachments 2 through 5 for South Dakota State University's required coursework & schedule.

South Dakota State University Augustana University

### **ATTACHMENT 2**

### SOUTH DAKOTA STATE UNIVERSITY-AUGUSTANA UNIVERSITY COURSE REQUIREMENTS FOR CIVIL AND ENVIRONMENTAL ENGINEERING

### Bachelor of Science SDSU-Augustana Articulation Plan Major: Civil Engineering

#### 2019-2020 Sample 4-Year Plan

#### Total Degree Requirements: 130 credits

Students are not limited to this plan; it is meant to be used as a guide for planning purposes in consultation with your advisor. The sample schedule is one possible path to completing your degree within four years. For official program requirements, please refer to the catalog.

First Year					
all					
Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
CEE 106	Elementary Surveying	p. MATH 115 or MATH 120	SDSU	CEE 106	3
CEE 106L	Elementary Surveying Lab	CEE 106 Co-requisite	SDSU	CEE 106L	1
CHEM 112	General Chemistry I	p. MATH 114 or higher	AU	CHEM 116	3
CHEM 112L	General Chemistry I lab	CHEM 112 Co-requisite	AU	CHEM 116	1
ENGL 101	Composition I (SGR #1)	p. Placement	AU	Sophia	3
GE 101	Introduction to Engineering and Technical Professions		AU	Sophia	1
MATH 123	Calculus I (SGR #5)	p. MATH 115 or MATH 120 or Placement, earn C or better	AU	MATH 151	4
		Total Credit Hours			16
Spring					
Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
CEE 101	Introduction to Civil Engineering	Majors only	SDSU	CEE 101	1
CHEM 114	General Chemistry II	p. CHEM 112 and MATH 114 or higher	AU	CHEM 117	3
ENGL 201	Composition II (SGR #1)	p. ENGL 101	AU	Sophia	3
MATH 125	Calculus II	p. MATH 123, earn C or better	AU	Math 152	4
SGR #3	Social Science/Diversity (SGR #3)		AU	Sophia	3
SPCM 101	Fundamentals of Speech (SGR #2)		AU	Sophia	3
		Total Credit Hours			17

Second Year Fall					
Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
CEE 282	Civil Engineering Computer Aided Design	p. CEE 101 and CEE 106L	SDSU	CEE 282	. 3
EM 214	Statics	p. MATH 123	AU	*Note	3
MATH 225	Calculus III	p. MATH 125	AU	MATH 153	4
PHYS 211/L	University Physics I and Lab (SGR #6)	p. MATH 123	AU	PHYS 221	4

### Jerome J. Lohr College of Engineering Department of Physics & Mathematics

### South Dakota State University Augustana University

Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
SGR #4	Arts & Humanities/Diversity (SGR #4)		AU	Sophia	3
		Total Credit Hours			17
Spring					
Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
CEE 216	Civil Engineering Materials	p. CHEM 112, Spring Only	SDSU	CEE 216	2
CEE 216L	Civil Engineering Materials Lab	CEE 216 Co-requisite	SDSU	CEE 216L	1
CEE 225	Principles of Environmental Science and Engineering	p. CHEM 106 or 114	SDSU	CEE 225	3
EM 215	Dynamics	p. EM 214	SDSU	EM 215	3
MATH 321	Differential Equations	p. MATH 125	AU	MATH 310	3
PHYS 213/L	University Physics II and Lab (SGR #6)	p. PHYS 211/L	AU	PHYS 222	4
		Total Credit Hours			16

all					
Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
CEE 311	Structural Materials Lab	p. CEE 216 and 216L, EM 321 Co-requisite, Fall only	SDSU	CEE 311	1
EM 331	Fluid Mechanics	p. EM 215, Fall only	SDSU	EM 331	3
CEE 331	Fluid Mechanics Lab	EM 331 Co-requisite, Fall only	SDSU	CEE 331	1
CEE 340/L	Engineering Geology and Lab	p. CEE 216 and 216L, Fall only	SDSU	CEE 340/L	3
EM 321	Mechanics of Materials	p. EM 214	SDSU	EM 321	3
SGR #3	Social Science/Diversity (SGR #3)		AU	Sophia	3
SGR #4	Arts & Humanities/Diversity (SGR #4)		AU	Sophia	3
		Total Credit Hours			17

Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
CEE 323	Water Supply and Wastewater Engineering	p. CEE 225, Spring only	SDSU	CEE	3
CEE 346/L	Geotechnical Engineering and Lab	p. EM 321, Spring only	SDSU	323 CEE 346/I	4
CEE 353	Structural Theory	p. EM 321, Spring only	SDSU	CEE 353	3
CEE 363	Highway and Traffic Engineering	p. CEE 106, Spring only	SDSU	CEE 363	3
CEE 432	Hydraulic Engineering	p. EM 331, Spring only	SDSU	CEE 432	3
		Total Credit Hours			16

Jerome J. Lohr College of Engineering Department of Physics & Mathematics South Dakota State University Augustana University

Fall					
Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
CEE 456	Concrete Theory and Design	p. CEE 353, Fall only	SDSU	CEE 456	3
CEE 464	Capstone Design I	Senior Standing, Fall only	SDSU	CEE 464	1
CEE 482	Engineering Administration	Senior Standing, Fall only	SDSU	CEE 482	3
CEE 488	Professional Seminar	Senior Standing, Fall only	SDSU	CEE 488	1
STAT 381	Intro to Probability and Statistics	p. MATH 125	AU	MATH 315	3
CEE	Technical Elective	See advisor for approved list	SDSU		3
CEE	Technical Elective	See advisor for approved list	SDSU		3
		Total Credit Hours			17

Spring

Fourth Year

Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
CEE 455	Steel Design	p. CEE 353, Spring only	SDSU	CEE 455	3
CEE 465	Capstone Design II	p. CEE 464, Spring only	SDSU	CEE 465	2
CEE	Technical Elective	See advisor for approved list	SDSU		3
CEE	Technical Elective	See advisor for approved list	SDSU		3
CEE	Technical Elective	See advisor for approved list	SDSU		3
		Total Credit Hours			14

#### Comments/Notes

Students from all academic majors can pursue graduation with Fishback Honors College distinction. View the Honors program requirements.

- Students must earn a combined average "C" or better in all CEE courses
- Students must earn a combined average "C" or better in all mathematics courses.
- Students must earn an average "C" or better in EM 214, EM 215, EM 321 and EM 331.
- Students must earn a combined average "C" or better in all MATH courses and a "C" or better in MATH 123 and MATH 125. Students who fail to earn a "C" or better in any of these courses will be required to take them in subsequent semesters until the requirement is met.
- Students must take the Fundamentals of Engineering examination prior to graduation
- EM214, Statics. Students have two options. Option 1 is to take course from SDSU. Option 2 is to take course from Wash U

Total Augustana University Credits:58Total SDSU Credits:72Total Credits:130

South Dakota State University Augustana University

## ATTACHMENT 3 SOUTH DAKOTA STATE UNIVERSITY COURSE SCHEDULE CIVIL AND ENVIRONMENTAL ENGINEERING

First Fall	Course	Title	Credits	;
	EM 321	Mechanical of Materials	3	
	EM 215	Dynamics	3	
	CEE 311	Structural Materials Lab	1	
	CEE 106/L	Elementary Surveying & Lab	4	
	CEE 225	Prin. of Env Science & Eng.	3	
	CEE 482	Engineering Administration	3	Total = 17
First Spring	CEE 353	Structural Theory	3	
	CEE 216/L	Civil Engineering Materials & Lab	3	
	CEE 363	Highway & Traffic Engineering	3	
	CEE 282	Civil Eng. Comp. Aided Design	3	
	CEE 101	Intro to Civil Engineering	1	
	CEE 324	Water and Wastewater Engineering	3	Total = 16
Summer		Technical Elective	3	Total = 3
Second Fall	CEE 456	Concrete Theory & Design	3	
	CEE 464	Capstone Design I	1	
	CEE 340/L	Engineering Geology & Lab	3	
	EM 331	Fluid Mechanics	3	
	CEE 331	Fluid Mechanics Lab	1	
		Technical Electives	6	
	CEE 488	Professional Seminar	1	Total = 18
Second Spring	CEE 455	Steel Design	3	
	CEE 465	Capstone Design II	2	
	CEE 432	Hydraulics	3	
	CEE 346/L	Geotechnical Eng. & Lab	4	
		Technical Electives	6	Total = 18

Subtotal of SDSU Credits

72

Jerome J. Lohr College of Engineering Department of Physics & Mathematics South Dakota State University Augustana University

58

Augustana University transfer credits that apply to the SDSU Civil Engineering Degree:

Course	Title	SDSU Equivalent	Credits
CHEM 116	General Chemistry I	CHEM 112/L General Chemistry I & Lab	4
CHEM 117	General Chemistry II	CHEM 114 General Chemistry II	3
MATH 151	Calculus I	MATH 123 Calculus I	4
MATH 152	Calculus II	MATH 125 Calculus II	4
MATH 153	Calculus III	MATH 225 Calculus III	4
MATH 310	Differential Eq.	MATH 321 Differential Equations	3
MATH 315	Probability & Stats.	MATH 381 Intro. to Probability & Statistics	3
PHYS 221 Gen	eral Physics I	PHYS 211/L University Physics I & Lab	4
PHYS 222 Gen	eral Physics II	PHYS 212/L University Physics II & Lab	4
*Note		EM 214 Statics	3
Sophia		GE 101 Intro to Eng. & Tech. Professions	1
Sophia		ENGL 101 Composition I	3
Sophia		ENGL 102 Composition II	3
Sophia		SPCM 101 Fundamentals of Speech	3
Sophia		SGR #3 – Social Science/Diversity	6
Sophia		SGR #4 – Arts & Humanities	6

Total Augustana Credits Applied to SDSU BS in CE

\* EM214, Statics. Students have two options. Option 1 is to take course from SDSU. Option 2 is to take course from Wash U

Jerome J. Lohr College of Engineering Department of Physics & Mathematics

South Dakota State University Augustana University

#### **ATTACHMENT 4**

### SOUTH DAKOTA STATE UNIVERSITY-AUGUSTANA UNIVERSITY COURSE REQUIREMENTS FOR MECHANICAL ENGINEERING

Bachelor of Science	SDSU-Augustana Articulation Plan	Ma
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jor: Mechanical Engineering

2019-2020 Sample 4-Year Plan

Total Degree Requirements: 130 credits

Students are not limited to this plan; it is meant to be used as a guide for planning purposes in consultation with your advisor. The sample schedule is one possible path to completing your degree within four years. For official program requirements, please refer to the catalog.

First Year

Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
CHEM 112	General Chemistry I (SGR #6)	p. MATH 114 or higher	AU	CHEM 116	3
CHEM 112L	General Chemistry I Lab		AU	CHEM 116	1
GE 101	Introduction to Engineering and Technical Professions		AU	Sophia	1
MATH 123	Calculus I (SGR #5)	p. Placement or MATH 115 Minimum grade of "C" required.	AU	MATH 151	4
ME 121-121L	Production and Fabrication Processes and Lab		SDSU	ME 121/L	2
SGR #3	Social Sciences/Diversity		AU	Sophia	3
SPCM 101	Fundamentals of Speech (SGR #2)		AU	Sophia	3
		Total Credit Hours			17

#### Spring

Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
EM 214	Statics	p. MATH 123 Minimum grade of "C" required.	AU	*Note	3
ENGL 101	Composition I (SGR #1)	p. Placement	AU	Sophia	3
MATH 125	Calculus II	p. MATH 123 Minimum grade of "C" required.	AU	MATH 152	4
ME 212-212L	Mechanical Engineering Design Technologies and Lab	p. MATH 115 or consent	SDSU	ME 212/L	2
PHYS 211-211L	University Physics I and Lab	p. MATH 123 Minimum grade of "C" required.	AU	PHYS 221	4
		Total Credit Hours			16

Jerome J. Lohr College of Engineering Department of Physics & Mathematics South Dakota State University Augustana University

Second Year					
Fall			No. 199	in an in the service of	and an and a state of the
Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
EM 215	Dynamics	p. EM 214 Minimum grade of "C" required.	SDSU	EM 215	3
EM 321	Mechanics of Materials	p. EM 214 Minimum grade of "C" required	SDSU	EM 321	3
MATH 321	Differential Equations	p. MATH 125	AU	MATH 310	3
ME 241	Engineering Materials	p. MATH 123 & CHEM 112- 112L	SDSU	ME 241	3
PHYS 213-213L	University Physics II and Lab	PHYS 211-211L & MATH 123	AU	PHYS 222	4
		Total Credit Hours			16

#### Spring

Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
ECON 201	Principles of Microeconomics (SGR #3)		AU	ECON 120	3
ENGL 277	Technical Writing in Engineering		AU	Sophia	3
GE 231	Technology, Society, and Ethics		SDSU	GE 231	3
MATH 331 or MATH 471	Advanced Engineering Math or Numerical Analysis	p. MATH 321 or p. MATH 225	SDSU	MATH 331 or 471	3
ME 230-230L	Engineering Design Methods and Lab	p. EM 214 and ME 121-121L and ME 212-212L	SDSU	ME 230/L	2
ME 311	Thermodynamics I	p. PHYS 211-211L and EM 215. Minimum grade of "C" required.	SDSU	ME 311	3
		Total Credit Hours			17

### Third Year

## Fall

Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
EE 300	Basic Electrical Engineering I	p. MATH 125 and PHYS 213	SDSU	EE 300	2
EE 300L	Basic Electrical Engineering I Lab		SDSU	EE 300L	1
EM 331	Fluid Mechanics	p. EM 215. Minimum grade of "C" required.	SDSU	ME 331	3
MATH 225	Calculus III	p. MATH 125	AU	MATH 153	4
ME 312	Thermodynamics II	p. ME 311 and MATH 321. Minimum grade of "C" required.	SDSU	ME 312	3
ME 321	Fundamentals of Machine Design	p. EM 215	SDSU	ME 321	3
		Total Credit Hours			16

Jerome J. Lohr College of Engineering Department of Physics & Mathematics

#### South Dakota State University Augustana University

Spring					
Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
EE 302	Basic Electrical Engineering II	p. EE 300-300L	SDSU	EE 302	2
EE 302L	Basic Electrical Engineering II Lab		SDSU	EE 302L	. 1
ME 376-376L	Measurements and Instrumentation and Lab	p. ENGL 277 and Co- requisites EM 321 and EM 331	SDSU	ME 376/L	2
ME 415	Heat Transfer	p. ME 311 and EM 331 and MATH 321 or consent	SDSU	ME 415	3
ME 421	Design of Machine Elements	p. EM 321 and ME 321	SDSU	ME 421	3
SGR #4	Arts and Humanities/Diversity		AU	Sophia	3
STAT 381	Introduction to Probability and Statistics	p. MATH 125	AU	MATH 315	3
		Total Credit Hours			17

#### Fourth Year

#### Fall

Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
ME 323	Vibrations	p. EM 215 and EM 321 and MATH 331 or MATH 471	SDSU	ME 323	3
ME 476	Thermo-fluids Lab	p. ME 376-376L and EM 331 and ME 312 and ME 415	SDSU	ME 476	1
ME 478	Mechanical Systems Design I	p. ME 421 and MATH 331 or MATH 471	SDSU	ME 478	2
ME 490	Seminar		SDSU	ME 490	1
Tech Electives	Choose from approved list of 300/400 level Chem or Phys	AU Chem or Phys	AU	TBD	3
Tech Electives	Choose from list		SDSU		3
Tech Electives	Choose from list		SDSU		3
		Total Credit Hours			16

#### Spring

Prefix + Number	Course Title	Prerequisites/Comments	University	Course	Credits
ME 451	Automatic Controls	p. EE 300-300L or consent and MATH 331 or MATH 471	SDSU	ME 451	3
ME 452	Dynamic Systems Lab	p. ME 323	SDSU	ME 452	1
ME 479-479L	Mechanical Systems Design II and Lab	p. ME 478	SDSU	ME 479/L	2
SGR #4	Arts and Humanities/Diversity		AU	Sophia	3
Tech Electives	Choose from list		SDSU		3
Tech Electives	Choose from list		SDSU		3
		Total Credit Hours			15

#### Comments/Notes

Students from all academic majors can pursue graduation with Fishback Honors College distinction. View the Honors program requirements.

\*Minimum overall GPA of 2.0 (C average) in Mathematics/Statistics courses required.

Jerome J. Lohr College of Engineering Department of Physics & Mathematics

South Dakota State University Augustana University

\*Minimum overall GPA of 2.0 (C average) in all ME-prefix courses required.

\*A minimum grade of "C" in each of the following courses: Math 123, Math 125, Phys 211, ME 311, ME 312 and all EM designated courses.

\*Students who fail to earn a "C" or better in any of these courses will be required to repeat them in each subsequent semester until the requirement is met.

\*Students must take the Fundamentals of Engineering Exam prior to graduation.

\*EM214, Statics. Students have two options. Option 1 is to take course from SDSU. Option 2 is to take course from Wash U

Total Augustana University Credits:58Total SDSU Credits:72Total Credits:130

Jerome J. Lohr College of Engineering Department of Physics & Mathematics

South Dakota State University Augustana University

### ATTACHMENT 5 SOUTH DAKOTA STATE UNIVERSITY COURSE SCHEUDLE MECHNICAL ENGINEERING

First Fall	Course	Title	Cr	edits
	EM 321	Mechanical of Materials	3	
	EM 215	Dynamics	3	
	ME 121/L	Production & Fabrication Processes & Lab	2	
	ME 212/L	ME Design Technologies & Lab	2	
	ME 241	Engineering Materials	3	
	MATH 331	Adv. Eng. Math or Numerical Analysis	3	
	Or MATH 471		То	tal = 16
First Spring	EE 300/L	Basic EE I & Lab	3	
	ME 311	Thermodynamics I	3	
	ME 230/L	Engineering Design Methods & Lab	2	
	ME 323	Vibrations	3	
	ME 321	Fundamentals of Machine Design	3	
	EM 331	Fluid Dynamics	3	Total = 17
Second Fall	EE 302/L	Basic EE II & Lab	3	
	GE 231	Technology, Society & Ethics	3	
	ME 312	Thermodynamics II	3	
	ME 478	Mechanical Systems Design I	2	
	ME 421	Design of Machine Elements	3	
	ME 415	Heat Transfer	3	
	ME 376/L	Measurements & Instrumentation & Lab	2	Total = 19
Summer		Technical Elective – Internship	3	
Second Spring	ME 451	Automatic Controls	3	
	ME 452	Dynamic Systems Lab	1	
	ME 476	Thermo-Fluids Lab	1	
	ME 490	Seminar	1	
	ME 479/L	Mechanical Systems Design II & Lab	2	
		Technical Electives	9	Total = 17

Subtotal of SDSU Credits

72

Jerome J. Lohr College of Engineering Department of Physics & Mathematics South Dakota State University Augustana University

Augustana University transfer credits that apply to the SDSU Mechanical Engineering Degree:

Course	Title	SDSU Equivalent	Credits
CHEM 116	General Chemistry I	CHEM 112/L General Chemistry I & Lab	4
MATH 151	Calculus I	MATH 123 Calculus I	4
MATH 152	Calculus II	MATH 125 Calculus II	4
MATH 153	Calculus III	MATH 225 Calculus III	4
MATH 310	Differential Eq.	MATH 321 Differential Equations	3
MATH 315	Probability & Stats.	MATH 381 Intro. to Probability & Statistics	3
PHYS 221	General Physics I	PHYS 211/L University Physics I & Lab	4
PHYS 222	General Physics II	PHYS 212/L University Physics II & Lab	4
ECON 120	Economics 1	ECON 201 Prin. of Microeconomics	3
Approved 300	/400 level Chem/Phys	Technical Elective	3
*Note		EM 214 Statics	3
Sophia		GE 101 Intro to Eng. & Tech. Professions	1
Sophia		ENGL 101 Composition I	3
Sophia		ENGL 102 Composition II	3
Sophia		SPCM 101 Fundamentals of Speech	3
Sophia		SGR #3 – Social Science/Diversity	3
Sophia		SGR #4 – Arts & Humanities	6

Total Augustana Credits Applied to SDSU BS in ME

58

### NOTES:

- 1) Students may enroll in ME 421 and ME 478 concurrently.
- 2) English 201, Composition II can be substituted for ENGL 277, Technical Writing for Engineering
- 3) EM 214, Statics. Students have two options:
  - a. Complete Statics course from Washington University in Saint Louis, Missouri
  - b. Complete EM 214, Statics at SDSU. Note that the two-year completion plan assumes that the Statics course has been completed before starting at SDSU. Within EM 214 complete by admission to SDSU, an additional 1-2 semesters would be required due to course scheduling.