

**MINNESOTA STATE COLLEGES AND
UNIVERSITIES*
ARTICULATION AGREEMENT
BETWEEN**

**Minnesota West Community & Technical College
AND
South Dakota State University**

*The Board of Trustees of the Minnesota State Colleges and Universities is authorized by Minnesota Statutes, Chapter 136F to enter into Agreements and has delegated this authority to colleges and universities.

This Agreement is entered into between Minnesota West Community & Technical College (MN West) (hereinafter sending institution), and South Dakota State University (SDSU) (hereinafter receiving institution).

The sending institution has established an **Engineering, A.S.** (hereinafter sending program), and the receiving institution has established a **Mechanical Engineering, B.S.** (hereinafter receiving program), and will facilitate credit transfer and provide a smooth transition from one related program to another. It is mutually agreed:

Admission and Graduation Requirements

- A. The receiving institution's admission and program admission requirements apply to both direct entry students and to students who transfer under this agreement.
- B. Students must fulfill the graduation requirements at both institutions.
- C. Students must complete the entire sending program and meet the receiving institution's admission requirements for the agreement to apply

Transfer of Credits

- A. The receiving institution will accept 59 credits from the sending program. A total of 71 credits remain to complete the receiving program.
- B. Courses will transfer as described in the attached Program Articulation Table.

Implementation and Review

- A. The Chief Academic Officers or designees of the parties to this agreement will implement the terms of this agreement, including identifying and incorporating any changes into subsequent agreements, assuring compliance with system policy, procedure and guidelines, and conducting a periodic review of this agreement.
- B. This Articulation Agreement is effective on 01/01/2013 and shall remain in effect until the end date of 01/01/2018 or for five years, whichever occurs first, unless terminated or amended by either party with 90 days prior written notice.
- C. The college and university shall work with students to resolve the transfer of courses should changes to either program occur while the agreement is in effect.
- D. This Articulation Agreement will be reviewed by both parties beginning 07/01/2017 (within six months of the end date).

July 6, 2011

PROGRAM ARTICULATION TABLE

	College (sending)	University (receiving)
Institution	MN West	SDSU
Program name	Engineering	Mechanical Engineering
Award Type (e.g., AS)	AS	BS
Credit Length		
CIP code (6-digit)		
Describe program admission requirements (if any)		

Instructions

- List all required courses in both academic programs.
- MnTC goal areas transfer to the receiving institution according to the goal areas designated by the sending institution.
- Do not indicate a goal area for general education courses that are not part of the MnTC.
- For restricted or unrestricted electives, list number of credits.
- Credits applied: the receiving institution course credit amount may be more or less than the sending institution credit amount. Enter the number of credits that the receiving institution will apply toward degree completion.
- Show equivalent university-college courses on the same row to ensure accurate DARS encoding.
- Equiv/Sub/Wav column: If a course is to be encoded as equivalent, enter Equiv. If a course is to be accepted by the university as a "substitution" only for the purposes of this agreement, enter Sub. If a course requirement is waived by the receiving institution, enter Wav. If a course is to be accepted by the university as a MnTC goal area, restricted elective or unrestricted elective, leave the cell blank.

(To add rows, place cursor outside of the end of a row and press enter.)

SECTION A - Minnesota Transfer Curriculum-General Education

College (sending)			University (receiving)			
course prefix, number and name	Goal(s) ¹	Credits	course prefix, number and name	Goal(s) ¹	Credits Applied	Equiv Sub Wav
Minnesota Transfer Curriculum-General Education						
ENGL 1101- Composition I		3	ENGL 101 – Composition I	SGR #1	3	
ENGL 2276 – Technical Writing		3	ENGL 277 – Technical Writing in Engineering	SGR #1	3	
SPCH 1101- Fundamentals of Speech		3	SPCM 101 – Fundamentals of Speech	SGR #2	3	
CHEM 1101- General Inorganic Chemistry I		4	CHEM 112/112L – General Chemistry I & Lab	SGR #6	4	
		5				
MATH 1121- Calculus I		4	MATH 123 – Calculus I	SGR #5	4**	
GEOG – 1100 – Intro to Geography		3	GEOG 101 – Intro to Geography	SGR #3	3	
ECON 2201 – Principles of Macroeconomics		3	ECON 202 – Principles of Economics	SGR #3	3	
HUMANITIES ELECTIVES (choose from Art, Humanities, English Literature, Music, Philosophy, Theatre, History, etc. – courses must have SDSU equivalent that also is listed under SGR #4))		6*	Humanities Electives as indicated in SDSU catalog under SGR #4	SGR #4	6	
HIST 1111 – Western Civilization		3	HIST 121 – Western Civilization I	IGR #2	3	
MnTC/General Education Total		32*				

Special Notes, if any: * The Humanities electives would be outside what is listed in the total credits and listing in the MN West Catalog. ** To earn a Bachelor of Science in Mechanical Engineering, a minimum grade of "C" in each of the following courses: MATH 123, MATH 125, PHYS 211/211L, EM 214, and EM 215 is required. In addition, a combined GPA of 2.0 or better in all Mathematics/Statistics courses is required.

¹ MnTC goal areas transfer to the receiving college/university according to the goal areas designated by the sending college/university

SECTION B - Major, Emphasis, Restricted and Unrestricted Electives or Other

(pre-requisite courses, required core courses, required courses in an emphasis, or electives (restricted or general) within the major). Restricted electives (in Major) fulfill a specific requirement within a major. Example A: "Chose two of the following three courses;" Example B: A Biology degree may require 40 science credits (20 credits of required courses + 20 credits of listed related courses, such as botany, genetics, sociobiology, etc. which students can select).

Major, Emphasis, Restricted, Unrestricted Electives or Other Courses				
CSCI 2235 – C++ Programming	3	No credit		0
PHYS 2121 – General Physics & Lab	5	PHYS 211/211L – University Physics I & Lab	SGR #6	5
ENGR 1101-Intro Engineering	1	GE 109/109L	IGR #1	2
PHIL 2205 – Business Ethics	2	In combination with 1101 fulfills IGR #1		
ENGR 2215 – Engineering Mechanics – Dynamics	3	EM 215 – Dynamics		3**
MATH 1122 – Calculus II	4	MATH 125 – Calculus II		4**
MATH 2201 – Calculus III	4	MATH 225 – Calculus III		4**
MATH 2206 – Ordinary Differential Equations	4	Math Elective		4
PHYS 2122 – General Physics II & Lab	5	PHYS 213/213L – University Physics II & Lab		5
ENGR 2214 – Engineering Mechanics-Statics	3	EM 214 – Statics		3**
Restricted elective credits - list courses (if none enter 0); PHIL 2201 – Introduction to Ethical Theory; and PHED 1130 – Fitness for Life	3 1	NOTE: 71 credits at SDSU are required for this major. More than 59 credits may transfer from MN West; however, only 59 credits will count toward the Mechanical Engineering BS degree at SDSU.		
Unrestricted elective credits (if none enter 0)	0			
Major, Emphasis, Unrestricted Electives Total	33	Total College Credits Applied (sum of sections A and B)	*59	

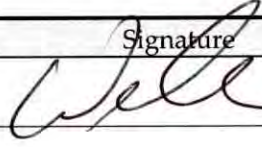

SECTION C - Remaining University (receiving) Requirements

List major requirements & required support courses here	course prefix, number and name	Credits
	EE 300/300L – Basic Electrical Engineering I/Lab	3
EE 302/302L – Basic Electrical Engineering II & Lab	3	
EM 321 – Mechanics of Materials	3	
EM 331 – Fluid Mechanics	3	
GE 121 – Engineering Design Graphics	1	
GE 123 – Computer Aided Drawing	1	
GE 225 – Survey of Machine Tool Applications	1	
MATH 321 – Differential Equations	3	
MATH 331 – Advanced Engineering Mathematics OR MATH 471/571 – Numerical Analysis I	3	
ME 240 – Introduction of Mechanical Design	3	
ME 241 – Engineering Materials	3	
ME 311 – Thermodynamics I	3	
ME 312 – Thermodynamics II	3	
ME 321 – Fundamentals of Machine Design	3	
ME 323 – Vibrations	3	
ME 376/376L – Measurements & Instrumentation & Lab	2	
ME 415 – Heat Transfer	3	
ME 421 – Design of Machine Elements	3	
ME 451 – Automatics Controls	3	
ME 452 – Dynamic Systems Lab	1	
ME 476 – Thermo-Fluids Lab	1	
ME 478 – Mechanical Systems Design I	2	
ME 479/479L – Mechanical Systems Design II & Lab	2	
STAT 381 – Introduction to Probability & Statistics	3	
Technical Electives from list provided in SDSU catalog	12	
	Total Remaining University Credits	71

SECTION D - Summary of Total Program Credits

College (sending) Credits		University (receiving) Requirements	
MnTC/General Education	37		
Major, Emphasis, Unrestricted Electives or Other	32		
Total College Credits	69	Total College Credits Applied	59*
		Remaining credit to be taken at the university (receiving institution)	71*
		Total Program Credits	130

Special Notes, if any: *71 credits at SDSU are required for the major. More than 59 credits may transfer from MN West; however, only 59 credits will count toward the Mechanical Engineering BS degree. In addition to the graduation requirements and academic performance requirements specified in the receiving institution's catalog, the following grade requirements must be met to earn a bachelor of science degree in mechanical engineering: a combined average of "C" or better (GPA of 2.0 or better) in the mechanical engineering courses; a combined average of "C" or better (GPA of 2.0 or better) in the mathematics/statistics courses; 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 take them in each subsequent semester until the requirement is met. Students must follow course prerequisite requirements.

College	Name	Signature	Date
Chief Academic Officer	Jeffery Williamson		11/14/12
Provost Title			
University	Name	Signature	Date
Chief Academic Officer	Lauric Stenberg Nichols		11-20-2012
Provost Title			

10/2012

July 6, 2011