

<p style="text-align: center;">MINNESOTA STATE COLLEGES AND UNIVERSITIES*</p> <p style="text-align: center;">ARTICULATION AGREEMENT BETWEEN</p>	<p style="text-align: center;">NORTH DAKOTA STATE COLLEGE OF SCIENCE AND MINNESOTA STATE UNIVERSITY MOORHEAD</p>
<p>*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.</p>	

This Agreement is entered into between **NORTH DAKOTA STATE COLLEGE OF SCIENCE** (hereinafter sending institution), and **MINNESOTA STATE UNIVERSITY MOORHEAD** (hereinafter receiving institution). This Agreement and any amendments and supplements, shall be interpreted pursuant to the laws of the State of Minnesota.

The sending institution has established the following (hereinafter sending program):

Architectural Drafting & Estimating Technology AAS, 70 cr, 15.0101
Building Construction Technology AAS, 76 cr, 15.1001
Construction Management Technology AAS 74 cr
Electrical Construction AAS, 73 cr, 15.0399
Heating, Ventilating, Air Conditioning and Refrigeration Technology AAS, 73 cr, 47.0201
Industrial Electrical AAS, 73 cr, 15.0399
Land Surveying and Civil Engineering Technology AAS, 72 cr, 15.0202
Mechanical Systems AAS, 73 cr, 46.0503

And the receiving institution has established an **Operations Management: Construction Technology BS** (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 47 – 64 credits from the sending program. A total of 62 – 77 credits remain to complete the receiving program.
- B. Courses will transfer as described in the attached Program Articulation Table. For system institutions, once the courses are encoded, they will transfer as described in the Transferology audit.

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 09/15/2020 and shall remain in effect until the end date of 09/15/2025 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 3/15/2025 (within six months of the end date).
- E. When a student notifies the receiving institution of their intent to follow this agreement, the receiving institution will encode course waivers and substitutions.

PROGRAM ARTICULATION TABLE		
	College (sending)	University (receiving)
Institution	North Dakota State College of Science	Minnesota State University Moorhead
Program name	Architectural Drafting & Estimating Technology 15.0101 (70 cr) Building Construction Technology 15.1001 (76 cr) Construction Management Technology (73 cr) Electrical Construction 15.0399 (73 cr) Heating, Ventilating, Air Conditioning and Refrigeration Technology 47.0201 (73 cr) Industrial Electrical 15.0399 (73 cr) Land Surveying and Civil Engineering Technology 15.0202 (72 cr) Mechanical Systems 46.0503 (73 cr)	Operations Management: Construction Technology
Award Type (e.g., AS)	AAS	BS
Credit Length	70 - 76	120
CIP code (6-digit)	Varies, see above	52.020500
Describe program admission requirements (if any)	ACT Reading: 15 English: 15 Math: 17	AAS with 30 or more prescribed technical credits, as prescribed by the program's accrediting board, The Association of Technology, Management, and Applied Engineering (ATMAE).
Instructions <ul style="list-style-type: none"> 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	Equivalent Wav
Minnesota Transfer Curriculum-General Education						
General Education Requirement*						
Architectural Drafting & Estimating Technology (4 - 10 cr) Building Construction Technology (5 - 10 cr) Construction Management Technology (8 - 13 cr) Electrical Construction (5 - 10 cr) Heating, Ventilating, Air Conditioning and Refrigeration Technology (5 - 10 cr) Industrial Electrical (5 - 10 cr) Land Surveying and Civil Engineering Technology (4 - 10 cr) Mechanical Systems (5 - 16 cr)	1 - 10	4 - 16	MnTC General Education courses Goal 1A: Oral Communication Goal 1B: Written Communication Goal 2: Critical Thinking Goal 5: History and the Social and Behavioral Sciences Goal 6: The Humanities & Fine Arts Goal 7: Human Diversity Goal 8: Global Perspective Goal 9: Ethical and Civic Responsibility Goal 10: People and the Environment	1 - 10	4 - 16	
*ENGL 105 Technical Communications is not applicable. ENGL 110 is recommended instead. CIS and CSCI courses don't transfer as general ed courses. Technical math: MATH 130, MATH 132, MATH 134, MATH 136, Basic Math: MATH 120, MATH 123, MATH 125, FYE 101, HPER wellness electives don't transfer as gen ed.			Not applicable		0	
MnTC/General Education Total		4 - 16				

Special Notes: * Students should work with their advisor at NDSCS and MSU Moorhead to choose the best general education courses to take at NDSCS. Technical and basic math won't transfer as the list in section B indicates. MSUM will transfer the same number of credits NDSCS awards. Students will need to complete the general education (LASC) requirements at MSUM if they weren't completed at NDSCS. Examples of how some general education courses will transfer are listed below:

NDSCS ENGL 110 College Composition I (3 cr) is equivalent to MSUM ENGL 101 English Composition I (Goal 1)
 NDSCS COMM 110 Fundamentals of Public Speaking (3 cr) is equivalent to MSUM COMM 100 Speech Communications (Goal 1)
 NDSCS MATH 103 College Algebra (3 cr) is equivalent to MSUM MATH 127 College Algebra (Goal 4)*
 NDSCS MATH 210 Elementary Statistics (3 cr) is equivalent to MSUM MATH 234 Probability & Statistics (Goal 4)*
 NDSCS PSYC 111 Intro to Psychology (3 cr) is equivalent to MSUM PSY 113 General Psychology (Goal 5)
 NDSCS SOC 110 Intro to Sociology (3 cr) is equivalent to MSUM SOC 110 Intro to Sociology (Goal 5).
 NDSCS ECON 201 Principles of Microeconomics (3 cr) is equivalent to MSUM ECON 202 Principles of Economics I: Micro (Goal 5)*
 NDSCS PHYS 211 College Physics I & PHYS 211L (4 cr) is equivalent to MSUM PHYS 160 College Physics I w Lab (Goal 3)
 NDSCS PHIL 210 Ethics (3 cr) is equivalent to MSUM PHIL 215 Contemporary Moral Issues (Goals 6 & 9).
 NDSCS PSYC 100 Human Relations in Organizations transfers as a goal 5 course. (Goal 5).

*Required courses for Operations Management BS.

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).

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

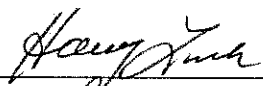
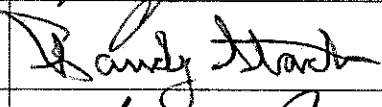
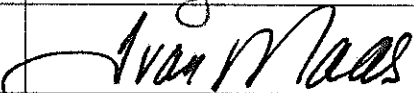

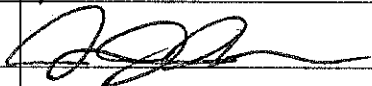
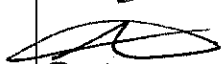

Major, Emphasis, Restricted, Unrestricted Electives or Other Courses				
Technical credits as prescribed in program				
Architectural Drafting & Estimating Technology (43 cr)**				
Building Construction Technology (55 cr)**				
*Construction Management Technology (36 - 40 cr)**		Technical credits as prescribed in the program	30	
Electrical Construction (54 cr)		Additional credits up to 18 will be applied as unrestricted elective credits	Up to 18	
Heating, Ventilating, Air Conditioning and Refrigeration Technology (54 cr)				
Industrial Electrical (54 cr)				
Land Surveying and Civil Engineering Technology (53 cr)				
Mechanical Systems (54 cr)				
BADM classes, BUSN classes		Not Applicable	0	
Major, Emphasis, Unrestricted Electives Total	36 - 54	Total College Credits Applied (sum of sections A and B)	43 - 64	
Special Notes: * Depending on the Business/ Technical Electives taken the number of technical credits will vary. Note that NDSCS ACCT 200 Elements of Accounting I is equivalent to MSUM ACCT 230. This is required in the major. No more than 48 technical credits will be applied as elective credit. If the program doesn't have that many technical credits, then the lower number of credits will be applied. **NDSCS ARCT 144 Constr Estimating I and ARCT 241 Constr Estimating II together are equivalent to MSUM CM 230. NDSCS BCT 222 Construction Safety is equivalent to MSUM 365 NDSCS CMT 251 Constr Docs & Specs is equivalent to MSUM 370 These courses don't count as technical but they do count toward a major requirement.				

SECTION C - Remaining University (receiving) Requirements		
	course prefix, number and name	Credits
	Gen Ed/ LASC goal areas and credits*	17 - 29
	ECON 202 Principles of Economics I: Micro (Goal 5)	3
	MATH 127 College Algebra (Goal 4)	3
	MATH 234 Intro to Probability & Statistics (Goal 4)	3
	OM 380 Methods Improvement	3
	OM 393 Occupational Safety & Health OR CM 365 Construction Safety **	3
	OM 395 Computer Applications for Technologists	3
	OM 469 Internship OR CM 469 Internship	3
	ACCT 230 Principles of Accounting I	3
	CM 230 Estimating I: Quantity Survey**	3
	CM 370 Construction Documents & Specifications**	3
	CM 335 Estimating II: Pricing & Productivity	3
	CM 340 Planning & Scheduling**	3
	CM 434 Construction Cost Analysis	3
	CM 445 Contractor Quality Management	3
	CM 460 Project Administration	3
	Electives (Credits needed to bring total to 120)	0 - 6
	Total Remaining University Credits²	62 - 77
Special Notes: *LASC goal areas and credit requirements must be met. Equivalent courses can be taken at NDSCS (see Section A Notes). ** If equivalent classes were taken at NDSCS, they won't need to be taken at MSUM.		

SECTION D - Summary of Total Program Credits			
College (sending) Credits		University (receiving) Requirements	
MnTC/General Education	4 - 16		
Major, Emphasis, Unrestricted Electives or Other	36 - 54		
Total College Credits	70 - 76	Total College Credits Applied	43 - 64

	Remaining credit to be taken at the university (receiving institution)	62 - 77
	Total Program Credits	120 - 126
Special Notes, if any:		

² At least 40 of the required credits for the baccalaureate degree shall be at the upper-division level. If a lower division course is shown as equivalent to an upper division course, check with the university to determine if it will count toward the 40 required credits of upper division.

College	Name	Signature	Date
VP Academic & Student Affairs	Harvey Link		1/26/21
Construction & Design Technology Dept. Chair	Randy Stach		1/22/21
Building Systems Department Chair	Ivan Maas		1/22/21
University	Name	Signature	Date
Department Chairperson	Pam McGee		3/21/21
Academic Dean	Josh Behl		3/21/21
Chief Academic Officer	Arrick Jackson		3/31/21
DARS Encoder	Jolene Richardson		5/20/21
Date when equivalencies were verified/encoded in DARS by the receiving MnSCU institution.			