

MINNESOTA STATE COLLEGES AND  
UNIVERSITIES\*  
ARTICULATION AGREEMENT  
BETWEEN

NORTH DAKOTA STATE COLLEGE OF SCIENCE  
AND  
MINNESOTA STATE UNIVERSITY MOORHEAD

\*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 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):

Auto Body Repair & Refinishing Technology AAS 73 cr, 47.0603

Automotive Technology AAS, 71 cr, 47.0604

Diesel Technology – General Diesel AAS, 73 cr, 47.0605

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

Information Technology Support/ Information Systems Administrator AAS, 66 cr, 11.0901

Mechanical Systems AAS, 73 cr, 46.0503

Powersports Technology AAS, 70 cr

Precision Machining Technology AAS, 71 cr, 48.0501

Robotics, Automation and Mechatronics Technology – General Technician AAS, 72 cr, 15.0613

Robotics, Automation and Mechatronics Technology – Mechatronics Engineering Tech, 72 cr

Web Design/ Web Developer AAS, 65- 66 cr, 11.0202

Welding Technology AAS, 69 cr, 48.0508

And the receiving institution has established an Operations Management: Technical Management 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 51 - 67 credits from the sending program. A total of 59 - 71 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.

<b>PROGRAM ARTICULATION TABLE</b>		
	<b>College (sending)</b>	<b>University (receiving)</b>
<b>Institution</b>	North Dakota State College of Science	Minnesota State University Moorhead
<b>Program name</b>	Auto Body Repair & Refinishing Technology 47.0603 (73 cr) Automotive Technology 47.0604 (71 cr) Diesel Technology – General Diesel 47.0605 (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) Information Technology Support 11.0101 / Information Systems Administrator 11.0901 (66 cr) Mechanical Systems 46.0503 (73 cr) Powersports Technology (70 cr) Precision Machining Technology 48.0501 (71 cr) Robotics, Automation and Mechatronics Tech – General Tech 15.0613 (72 cr) Robotics, Automation and Mechatronics Tech – Mechatronics Engineering Tech (72 cr) Web Design/ Web Developer 11.0202 (65 – 66 cr) Welding Technology 48.0508 (69 cr)	Operations Management: Technical Management
<b>Award Type (e.g., AS)</b>	AAS	BS
<b>Credit Length</b>	65 - 73	120
<b>CIP code (6-digit)</b>	Varies, see above	52.020500
<b>Describe program admission requirements (if any)</b>		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

- 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) <sup>1</sup>	Credits	course prefix, number and name	Goal(s) <sup>1</sup>	Credits Applied	Equiv Sub Wav
<b>Minnesota Transfer Curriculum-General Education</b>						
General Education Requirement*						
Auto Body Repair & Refinishing Technology (8 - 16 cr)						
Automotive Technology (5 - 10 cr)						
Diesel Technology – General Diesel (5- 10 cr)						
Electrical Construction (5 - 10 cr)						
Heating, Ventilating, Air Conditioning and Refrigeration Technology (5 - 10 cr)						
Industrial Electrical (5 – 10 cr)						
Information Technology Support/ Information Systems Administrator (14 cr)		3 - 19	MnTC General Education Courses		3 - 19	
Mechanical Systems (5 - 16 cr)						
Powersports Technology (5 – 10 cr)						
Precision Machining Technology (5 - 10 cr)						
Robotics, Automation, & Mechatronics Tech – General Techn (5 - 8 cr)						
Robotics, Automation, & Mechatronics Tech – Mechatronics Engineering Tech (14 – 19 cr)						
Web Design/ Web Developer (12 cr)						
Welding Technology (12 cr)						
Basic Math (such as MATH 120, MATH 123, MATH 125) or Technical Math courses (such as MATH 130, MATH 132, MATH 136) CIS and CSCI courses, HPER 210, wellness elective, FYE 101			Not applicable		0	
<b>MnTC/General Education Total</b>		<b>3 - 19</b>				

**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. MSUM will transfer the same number of credits NDSCS awards. Students will need to

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

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/ 211L College Physics I/ Lab (4 cr) is equivalent to MSUM PHYS 160 College Physics I w Lab (Goal 3).
- NDSCS PSYC 100 Human Relations in Organizations transfers as a goal 5 course. (Goal 5).
- NDSCS PHIL 210 Ethics (3 cr) is equivalent to MSUM PHIL 215 Contemporary Moral Issues (Goals 6 & 9).

\*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).

Major, Emphasis, Restricted, Unrestricted Electives or Other Courses			
Technical Requirements*			
Auto Body Repair & Refinishing Technology (54 cr)			
Automotive Technology (50 cr)			
Diesel Technology – General Diesel (54 cr)			
Electrical Construction (54 cr)			
Heating, Ventilating, Air Conditioning and Refrigeration Technology (54 cr)			
Industrial Electrical (54 cr)		Technical credits as prescribed in the program	30
Information Technology Support/ Information Systems Administrator (49 cr)		Additional credits up to 18 will be applied as unrestricted elective credits	Up to 18
Mechanical Systems (54 cr)			
Powersports Technology (51 cr)			
Precision Machining Technology (52 cr)			
Robotics, Automation, & Mechatronics Tech – General Techn (53 cr)			
Robotics, Automation, & Mechatronics Tech – Mechatronics Engineering Tech (50 cr)			
Web Design/ Web Developer (44 - 45 cr)			
Welding Technology (50 cr)			
Wellness elective, FYE 101, BADM, BUSN, or BOTE classes		Not Applicable	0
<b>Major, Emphasis, Unrestricted Electives Total</b>	<b>45 - 54</b>	<b>Total College Credits Applied (sum of sections A and B)</b>	<b>51 - 67</b>

**Special Notes:** No more than 48 technical credits will be applied as elective credit. If the program doesn't have that many technical credits, that lower number of credits will be applied.

### SECTION C - Remaining University (receiving) Requirements

course prefix, number and name	Credits
Gen Ed/ LASC goal areas and credits*	14 - 30
MATH 127 College Algebra (Goal 4)	3
MATH 234 Intro to Probability & Statistics (Goal 4)	3
ECON 202 Principles of Economics I: Micro (Goal 5)	3
ACCT 230 Principles of Accounting I	3
MGMT 260 Principles of Management	3
OM 380 Methods Improvement	3
OM 393 Occupational Safety & Health	3
OM 470 Purchasing & Sourcing Management	3
OM 482 Quality Management	3
OM 395 Computer Apps for Technologists	3

	OM 483 Cost Analysis	3
	OM 485 Production & Inventory Management	3
	PMGT 300 Project Management & Scheduling	3
	PMGT 385 Process Leadership	3
	OM 469 Internship	3
	<b>Total Remaining University Credits<sup>2</sup></b>	59 - 75
<b>Special Notes:</b> *LASC goal areas and credit requirements must be met. Equivalent courses can be taken at NDSCS (see Section A Notes).		

<b>SECTION D - Summary of Total Program Credits</b>			
<b>College (sending) Credits</b>		<b>University (receiving) Requirements</b>	
<b>MnTC/General Education</b>	3 - 19		
<b>Major, Emphasis, Unrestricted Electives or Other</b>	45 - 54		
<b>Total College Credits</b>	65 - 73	<b>Total College Credits Applied</b>	51 - 67
		<b>Remaining credit to be taken at the university (receiving institution)</b>	59 - 75
		<b>Total Program Credits</b>	126
<b>Special Notes, if any:</b>			

<sup>2</sup> 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 for Academic Affairs	Harvey Link		2/1/21
Dean Arts, Science & Business	Ken Kompelien		1/27/21
Manufacturing Technologies Dept Chair	Steve Johnson		1/27/21
Transportation Department Chair	Terry Marohl		1/28/21
Building Systems Department Chair	Ivan Maas		2-1-21
University	Name	Signature	Date
Department Chairperson	Pam McGee		3/24/21
Academic Dean	Josh Behl		3/30/21
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.			