

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):

Architectural Drafting & Estimating Technology AAS, 70 cr, 15.0101
Auto Body Repair & Refinishing Technology AAS 73 cr, 47.0603
Automotive Technology AAS, 71 cr, 47.0604
Building Construction Technology AAS, 74 cr, 15.1001
Caterpillar Dealer Service Technician AAS, 74 cr, 47.0699
Diesel Technology – General Diesel AAS, 73 cr, 47.0605
Diesel Technology – Case IH AAS, 76 cr, 47.0605
Diesel Technology – Komatsu 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
John Deere Tech AAS, 82 cr, 47.0699
Land Surveying and Civil Engineering Technology AAS, 73 cr, 15.0202
Mechanical Systems AAS, 73 cr, 46.0503
Robotics, Automation and Mechatronics Technology AAS, 73 cr, 15.0613
Precision Machining Technology AAS, 71 cr, 48.0501
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 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- 64 credits from the sending program. A total of 62 - 70 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 08/12/2015 and shall remain in effect until the end date of 08/12/2020 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 2/12/2020 (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) Auto Body Repair & Refinishing Technology 47.0603 (73 cr) Automotive Technology 47.0604 (71 cr) Building Construction Technology 15.1001 (74 cr) Caterpillar Dealer Service Technician 47.0699 (74 cr) Diesel Technology – General Diesel 47.0605 (73 cr) Diesel Technology – Case IH 47.0605 (76 cr) Diesel Technology – Komatsu 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) John Deere Tech 47.0699 (82 cr) Land Surveying and Civil Engineering Technology 15.0202 (73 cr) Mechanical Systems 46.0503 (73 cr) Robotics, Automation and Mechatronics Technology	Operations Management

	15.0613 (73 cr) Precision Machining Technology 48.0501 (71 cr) Web Design/ Web Developer 11.0202 (65 – 66 cr) Welding Technology 48.0508 (69 cr)	
Award Type (e.g., AS)	AAS	BS
Credit Length	65 - 82	120
CIP code (6-digit)	Varies, see above	52.020500
Describe program admission requirements (if any)		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) ¹	Credits	course prefix, number and name	Goal(s) ¹	Credits Applied	Equiv Sub Wav
Minnesota Transfer Curriculum-General Education						
General Education Requirement*						
Architectural Drafting & Estimating Technology (7 - 10 cr)						
Auto Body Repair & Refinishing Technology (13 - 16 cr)						
Automotive Technology (5 - 8 cr)						
Building Construction Technology (7 - 10 cr)		5 - 16	MnTC General Education Courses		5 - 16	
Caterpillar Dealer Service Technician (7 - 10 cr)						
Diesel Technology – General Diesel (7 - 10 cr)						
Diesel Technology – Case IH (5 - 8 cr)						
Diesel Technology – Komatsu (5 - 8 cr)						

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

Electrical Construction (5 - 8 cr) Heating, Ventilating, Air Conditioning and Refrigeration Technology (13 - 16 cr) Industrial Electrical (5 - 8 cr) Information Technology Support/ Information Systems Administrator (14 cr) John Deere Tech (5 - 8 cr) Land Surveying and Civil Engineering Technology (7 - 10 cr) Mechanical Systems (11 - 14 cr) Robotics, Automation, & Mechatronics Technology (5 - 8 cr) Precision Machining Technology (5 - 8 cr) Web Design/ Web Developer (12 cr) Welding Technology (5 - 8 cr)						
Basic Math such as MATH 120 or Technical Math courses such as MATH 130, CIS 101, HPER 210, PHIL 213, wellness elective, FYE 101			Not applicable		0	

MnTC/General Education Total 5 - 16

Special Notes, if any: * 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 ENGL 101 English Composition I (3 cr) is equivalent to MSUM ENGL 101 English Composition I (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 CHEM 115 Introductory Chemistry & CHEM 115L (4 cr) is equivalent to MSUM CHEM 110/ CHEM 110L Fundamentals of Chemistry (Lab) (Goal 3)
- NDSCS PHYS 211 College Physics I & PHYS 211L (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. In addition two science courses are required.

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 credits as prescribed in program Architectural Drafting & Estimating Technology (52 cr) Auto Body Repair & Refinishing Technology (54 cr) Automotive Technology (52 cr) Building Construction Technology (53 cr) Caterpillar Dealer Service Technician (43 cr) Diesel Technology – General Diesel (50 cr) Diesel Technology – Case IH (53 cr) Diesel Technology – Komatsu (43 cr) Electrical Construction (54 cr) Heating, Ventilating, Air Conditioning and Refrigeration				Technical credits as prescribed in the program	30	

Technology (54 cr) Industrial Electrical (54 cr) Information Technology Support/ Information Systems Administrator (45 cr) John Deer Tech (52 cr) Land Surveying and Civil Engineering Technology (54 cr) Mechanical Systems (54 cr) Robotics, Automation & Mechatronics Technology (54 cr) Precision Machining Technology (52 cr) Web Design/ Web Developer (44 – 45 cr) Welding Technology (50 cr)		Additional credits up to 18 will be applied as unrestricted elective credits	Up to 18	
Wellness elective, FYE 101, BADM 110, BADM 240, BUSN 120, MATH 130, MATH 132, MATH 136, MATH 120, MATH 123, MATH 125, BOTE 108, DCAT 250, DCAT 251, JDAT 114, CIH 210, KMTS 210, KMTS 220		Not Applicable	0	
Major, Emphasis, Unrestricted Electives Total	43 - 54	Total College Credits Applied (sum of sections A and B)	51+	

SECTION C - Remaining University (receiving) Requirements

	course prefix, number and name	Credits
	Gen Ed/ LASC goal areas and credits*	26- 37
	ENGL 387 Technical Report Writing	3
	MGMT 360 Principles of Management	3
	OM 380 Methods Improvement	3
	OM 393 Occupational Safety & Health	3
	OM 394 Computer Applications for Technologists	3
	OM 469 Internship	3
	OM 482 Quality Planning & Implementation	3
	OM 483 Cost Analysis	3
	OM 485 Production & Inventory Management	3
	PMGT 300 Project Management & Scheduling	3
	PMGT 385 Process Leadership	3
	ACCT 230 Principles of Accounting I	3
	Total Remaining University Credits²	62 +

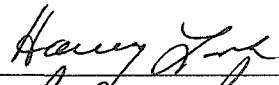
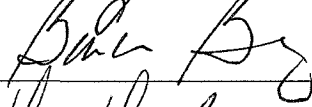


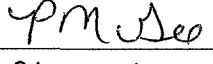



Special Notes: *The General Education courses listed below are required for the Operations Management BS degree. Equivalent courses can be taken at NDSCS (see Section A Notes). Students only need to select two science courses (one course must include a lab and the other must include a lab like experience), one course must be from Chemistry and the other from Physics.

- Choose one Chemistry course from the following:
 CHEM 102 Environmental Chemistry (3) OR
 CHEM 105 Crime Scene Science (3) OR
 CHEM 110 Fundamentals of Chemistry (3) **and**
 CHEM 110L Fundamentals of Chemistry Lab (1) OR
 CHEM 150 General Chemistry I (3) **and**
 CHEM 150L General Chemistry Laboratory I (1) OR
 CHEM 304 The Environment and You (3)
 PHYS 160 College Physics I (3) **and**
 PHYS 160L College Physics I Lab (1)
 ECON 202 Principles of Economics I: Micro (3)
 MATH 127 College Algebra (3)
 MATH 234 Introduction to Probability and Statistics (3)
 **Number of total credits earned must equal at least 120.

SECTION D - Summary of Total Program Credits

College (sending) Credits		University (receiving) Requirements	
MnTC/General Education	8 - 16		
Major, Emphasis, Unrestricted Electives or Other	43 - 54		
Total College Credits	65 - 82	Total College Credits Applied	51+
		Remaining credit to be taken at the university (receiving institution)	62+
		Total Program Credits	121+
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		12-3-15
Dean Technologies and Services Division	Barb Bang		12-3-15
Dean Art, Science & Business	Ken Kompelein		12-3-15
AVP Academic & Student Affairs	Dr. Philip Parnell		12-3-15
University	Name	Signature	Date
Department Chairperson	Pam McGee		12-17-15
Academic Dean	Dr. Marsha Weber		12-18-15
Chief Academic Officer	Dr. Joseph Bessie		12/24/15
DARS Encoder	Tara Spletstoser		1/24/16

Date when equivalencies were verified/encoded in DARS by the receiving MnSCU institution.