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| MINNESOTA STATE COLLEGES AND UNIVERSITIES* ARTICULATION AGREEMENT BETWEEN | Minnesota State Community and Technical College AND Minnesota State University Moorhead |
| <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 Minnesota State Community and Technical College (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
Architectural Drafting and Design AAS, 72 credits 15.130301
Automotive Service Technology AAS, 72 credits 47.060402
Civil Engineering Technology AAS, 60 credits 15.020101
Computer Programming AAS, 60 credits 11.020101
Construction Management AAS, 66 credits 52.200100
Diesel Equipment Technology AAS, 79 credits 47.060501
Drafting and 3D Technologies AAS, 66 credits 15.130601
Electrical Lineworker Technology AAS, 68 credits 46.030301
Information Technology AAS, 60 credits 11.010302
Network Administration and Security AAS, 60 credits 11.090101

(hereinafter sending programs), 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 60 – 64 credits from the sending program. A total of 63 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.

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- B. This Articulation Agreement is effective on 10/01/2018 and shall remain in effect until the end date of 10/01/2023 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 04/01/2023 (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 | Minnesota State Community and Technical College | Minnesota State University Moorhead |
| Program name/ Award Type (e.g., AS)/ CIP code (8-digit) | Architectural Drafting and Design AAS, 72 credits 15.130301 Automotive Service Technology AAS, 72 credits 47.060402 Civil Engineering Technology AAS, 60 credits 15.020101 Computer Programming AAS, 60 credits 11.020101 Construction Management AAS, 66 credits 52.200100 Diesel Equipment Technology AAS, 79 credits 47.060501 Drafting and 3D Technologies AAS, 66 credits 15.130601 Electrical Lineworker Technology AAS, 68 credits 46.030301 Information Technology AAS, 60 credits 11.010302 Network Technology Administration AAS, 60 credits 11.090101 | Operations Management, BS, 120 credits, 52.020500 |
| Aware Type (e.g., AS) | AAS | BS |
| Credit Length | 60-79 | 120 |
| CIP code (6-digit) | | 52.020500 |
| Describe program admission requirements (if any) | | AAS, AS, or Diploma with 30+ prescribed technical credits, as prescribed by 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. | | |

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- 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) | | | MSUM University (receiving) | | | |
|--|----------------------|---------|--------------------------------|----------------------|-----------------|---------------|
| course prefix, number and name (The following courses are requirements of the BS degree, but may not be required of the diploma or associate's programs. Students are encouraged to take these courses within their AS, AAS, or Diploma program.) | 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 and Design (15 cr) Automotive Service Technology (15 cr) Civil Engineering Technology (15 cr) Computer Programming (15 cr) Construction Management (15 cr) Diesel Equipment Technology (15 cr) Drafting and 3D Technologies (15 cr) Electrical Lineworker Technology (16 cr) Information Technology (15 cr) Network Administration and Security (15 cr) | 1-10 | 15 | MnTC General Education courses | 1-10 | 15 | Equiv Or Sub |
| MnTC/General Education Total | | 15 | | | | |

Special Notes, if any:*Students should work with their advisor at MSCTC and also MSU Moorhead to choose best general education courses to take at MSCTC. MSUM will accept other MnTC credits within the AAS and will transfer the same number of credits and goal areas Minnesota State Community and Technical College awards.

**** If students takes equivalencies of these courses at Minnesota State Community and Technical College, fewer MnTC credits will be required in MSU – Moorhead's program:**

CHEM 1110 – Aspects of Chemistry I is equivalent to MSUM CHEM 150 and 150L General Chemistry (Goal 3)

ECON 1160 - Principles of Economics: Microeconomics is equivalent to MSUM ECON 202 Principles of Economics I: Micro (Goal 5)

MATH 1100 - College Algebra is equivalent to MSUM MATH 127 College Algebra (Goal 4)

MATH 2210 - General Statistics is equivalent to MSUM MATH 234 Introduction to Probability and Statistics (Goal 4)

PHYS 1001 – Physics Concepts is equivalent to MSUM PHYS 160 and 160L College Physics I (Goal 3)

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 and Design (57 cr) | | | |

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

| | | | | |
|---|---------|---|--------------------|--|
| Automotive Service Technology (57 cr) Civil Engineering Technology (45 cr) Computer Programming (45 cr) Construction Management (45 cr) Diesel Equipment Technology (63 cr) Drafting and 3D Technologies (51 cr) Electrical Line Worker Technology (52 cr) Information Technology (45 cr) Network Administration and Security (45 cr) | | Technical Credits as prescribed in the program Additional credits up to 18 will be applied as unrestricted elective credits* | 30 Up to 18 | |
| ACCT, BUS, HLTH 1122, PDEV 1102 | 1 - 3 | Not Applicable | 0 | |
| Major, Emphasis, Unrestricted Electives Total | 45 - 63 | Total College Credits Applied (sum of sections A and B) | 60 - 64 | |
| Special Notes, if any: *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 |
|--|---|-----------|
| | Remaining MnTC/ LASC Goal Requirements | 18 |
| | 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 |
| | ENGL 387 Technical Report Writing | 3 |
| | MGMT 260 Principles of Management | 3 |
| | OM 380 Methods Improvement | 3 |
| | OM 393 Occupational Safety & Health | 3 |
| | OM 395 Computer Applications in Business | 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 |
| | OM 469 Internship | 3 |
| | Total Remaining University Credits | 63 |

Special Notes, if any:

***The General Education courses listed below are required for the Operations Management BS degree. Equivalent courses can be taken at Minnesota State Community and Technical College (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)

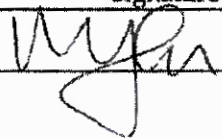
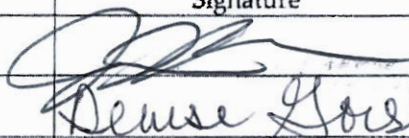

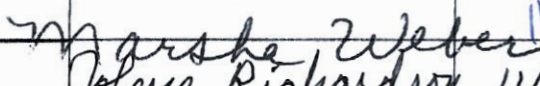
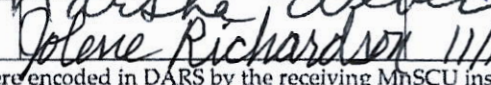
MATH 234 Introduction to Probability and Statistics (3)

****Other suitable course exceptions to be handled by the OM faculty after enrollment**

Number of credits in TECH 469 will be based upon how many credits a student needs to obtain the required 40 upper-division credits to receive the degree.

| SECTION D - Summary of Total Program Credits | | | |
|--|---------|--|-----------|
| College (sending) Credits | | University (receiving) Requirements | |
| MnTC/General Education | 15 | | |
| Major, Emphasis, Unrestricted Electives or Other | 45 - 57 | | |
| Total College Credits | 60 - 79 | Total College Credits Applied | 60 - 64 |
| | | Remaining credit to be taken at the university (receiving institution) | 63 |
| | | Total Program Credits | 123 - 127 |
| 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 |
|--|---------------------|--|----------|
| Chief Academic Officer | Mary Johnson |  | 10-1-18 |
| | | | |
| Title | | | |
| University | Name | Signature | Date |
| Department Chairperson | Josh Behl Pam McGee |  | 10/6/18 |
| Academic Dean | Denise Gorsline |  | |
| Chief Academic Officer | Marsha Weber |  | 11-9-18 |
| DARS Encoder | Jolene Richardson |  | 11/16/18 |
| Date when equivalencies were encoded in DARS by the receiving MnSCU institution. | | | |

4/9/13

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