

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

**Northland Community and Technical College
AND
Bemidji 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 Northland Community and Technical College (hereinafter sending institution), and Bemidji State University (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 an **Electronics Technology-Automated Systems, A.A.S.** (hereinafter sending program), and the receiving institution has established an **Applied Engineering, B.A.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, including grade requirements for courses and an overall GPA requirement.

Transfer of Credits

- A. The receiving institution will accept 60 credits from the sending program. A total of 67 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 09/19/2016 and shall remain in effect until the end date of 09/18/2021 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 03/18/2021 (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.

September 19, 2015

PROGRAM ARTICULATION TABLE

Check if the sending program ___ or receiving program ___ is new.

	College (sending)	University (receiving)
Institution	Northland Community and Technical College	Bemidji State University
Program name	Electronics Technology-Automated Systems	Applied Engineering
Award Type (e.g., AS)	A.A.S.	B.A.S.
Credit Length	60	120
CIP code (6-digit)	150406 (4392)	15.0000
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 1111 Composition I	1	3	ENGL 1151 Composition	1	3	Equiv
ENGL 2207 Technical Writing	2	3	ENGL 2150 Technical Writing	2	3	Equiv
MATH 1110 College Algebra	3	3	MATH 1170 College Algebra	3	3	Equiv
ECON 2201 Microeconomics or	5	3	ECON 2000 Markets and Resource Allocation or	5	3	Equiv
ECON 2202 Macroeconomics	5,8		ECON 2100 Macroeconomics and the Business Cycle	5,8		
MnTC General Electives	1-10	3	MnTC General Electives	1-10	3	Equiv

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

MnTC/General Education Total	15
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Special Notes, if any: Students may complete their liberal education requirements at the college or 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				
ETAS 1101 DC Power	3	Block Transfer for Technical Credits	38	Sub
ETAS 1103 AC Power	3			
ETAS 1104 Analog Circuits	3			
ETAS 1106 Digital Electronics	3			
ETAS 1110 Elec Design & Fabrication	3			
ETAS 1560 Robotic Programming I	2			
ETAS 2220 Microcontrollers I	4			
ETAS 2221 Sensor Technology	4			
ETAS 2224 Program Logic Controllers	4			
ETAS 2228 New & Emerging Technology	3			
ETAS 2230 Motor Controls	3			
ETAS 2232 Microcontrollers II	4			
ETAS 2580 Hydraulics & Pneumatics	3			
Area of Interest Electives (Choose one course)	3	General Electives Transfer Block	7	Sub
BUSN 1110 Intro to Business				
CMAE 1522 Quality Practices				
MKTG 1108 Customer Relations Management MKTG 2200 Principles of Marketing				
Major, Emphasis, Unrestricted Electives Total	45	Total College Credits Applied (sum of sections A and B)	60	

SECTION C - Remaining University (receiving) Requirements

course prefix, number and name	Credits
Complete all Remaining MnTC / Liberal Education Goals Areas	27
TADT COMMON CORE 15 credits	
TADT 3111 Project Management Methodology	3
TADT 3267 Economic and Cost Analysis	3
TADT 4385 Sustainability and Emerging Technologies	3
TADT 4873 Emphasis Related Capstone	3
TADT 4878 Quality Assurance	3
APPLIED ENGINEERING CORE 21 credits	
TADT 3100 Principles of Professional Development	3
TADT 3217 Material Science and Metallurgy	3
TADT 3537 Industrial Design and Innovation	3
TADT 3700 Operations Planning and Control	3
TADT 3887 Safety and Risk Management	3
TADT 4867 Lean Principles and Practices	3
TADT 4879 Services Process/Improvement	3
UPPER DIVISION TADT ELECTIVES	4
University unrestricted elective credits not counted elsewhere (if none enter 0)	
Total Remaining University Credits²	67

Special Notes:

SECTION D - Summary of Total Program Credits			
College (sending) Credits		University (receiving) Requirements	
MnTC/General Education	15		
Major, Emphasis, Unrestricted Electives or Other	45		
Total College Credits	60	Total College Credits Applied	60
		Remaining credit to be taken at the university (receiving institution)	67
		Total Program Credits	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	CAREY W. CASTLE	<i>Carey W. Castle</i>	7 Nov 2016
TRF Academic Dean	Mike Curfman	<i>Mike Curfman</i>	11/1/16
Title			
University	Name	Signature	Date
Chief Academic Officer			
Provost and Vice President of Academic Affairs	Dr. Michael Anderson	<i>Michael Anderson</i>	10-14-15
Title			
DARS Encoder	Bev Hodgson	<i>Bev Hodgson</i>	10/5/16
Date when equivalencies were verified/encoded in DARS by the receiving MnSCU institution.			