

MINNESOTA STATE COLLEGES AND
UNIVERSITIES*
ARTICULATION AGREEMENT
BETWEEN

Itasca Community 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 Itasca Community 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 **Engineering** (hereinafter sending program), and the receiving institution has established an **Engineering Technology** (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 60 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 12/20/16 and shall remain in effect until the end date of 12/19/2021 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 6/19/2021 (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.

PROGRAM ARTICULATION TABLE

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

	College (sending)	University (receiving)
Institution	Itasca Community College	Bemidji State University
Program name	Engineering	Engineering Technology
Award Type (e.g., AS)	AS	BS
Credit Length	60	120
CIP code (6-digit)	14.0102	15.0612
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							
CHEM 1201 General Chemistry	2,3	4		CHEM 2211 Principles of Chemistry I	3	4	EQUIV
PHYS 1201 General Physics I	2,3,10	4		PHYS 2101 Physics I	3,10	4	EQUIV
PHYS 1202 General Physics II	2,3	4		PHYS 2102 Physics II	3	4	EQUIV
Choose 4 of the following 5 Math Courses				BSU Equivalent			
MATH 1121 Pre-Calculus (4 Cr.)				MATH 1470 Pre-calculus (5 Cr.)			
MATH 1122 Calculus (4 Cr.)				MATH 2471 Calculus (5 Cr.)			
MATH 1123 Calculus II (4 Cr.)				MATH 2472 Calculus II (5 Cr.)			
MATH 2102 Multivariable Calculus (4 Cr.)	2,4	16		MATH 2408 Multivariable Calculus (4 Cr.)	4	16	Equiv
MATH 2104 Diff Q/Linear Algebra (4 Cr.)				MnTC Equivalent			
MnTC, must satisfy 2 different goal areas	1, 5-9	3		Liberal Education from the MnTC	1, 5-9	3	Equiv
MnTC/General Education Total		31					

Special Notes, if any: Remaining liberal education requirements for a bachelor's degree may be completed at the college or university.

¹ MnTC goal areas transfer to the receiving MnSCU college/university according to the goal areas designated by the sending college/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				
ENGR 1220 Intro to Engineering	3	TADT 1464 Engineering Technology Project I	3	Equiv
ENGR 1232 Engineering Design II	3	TADT 2465 Engineering Technology Project II	3	Equiv
ENGR 1233 Engineering Design III	3	TADT 2877 Engineering Problem Solving	3	Equiv
ENGR 1234 Engineering Design IV	3	TADT 1111 Introduction to Project Management	3	Equiv
ENGR 2101 Static Mechanics	3	TADT 2217 Strength of Materials	3	Equiv
PHYS 1201 General Physics I (credits counted in Section A)	0	PHYS 1101 General Physics I	0	Waiv
PHYS 1202 General Physics II (credits counted in Section A)	0	PHYS 1102 General Physics II	0	Waiv
Choose a minimum of 14 credits from the following	14		14	
BIOL 1201 General Biology (Goal Area 3 & 10)	(4)	BIOL 1211 Introduction to Biology I **	(4)	Equiv
CHEM 1200 STEM Chemistry	(2)	General Elective Credit	(2)	Equiv
CHEM 1202 General Chemistry II (Goal Area 3)	(4)	CHEM 2212 Principles of Chemistry II **	(4)	Equiv
CHEM 2201 Organic Chemistry I	(5)	General Elective Credit	(5)	Equiv
CSCI 1205 C++ Programming	(3)	2229 COMPUTER PROGRAMMING: C/C++	(3)	Equiv
ENGR 1115 Digital Logic	(3)	General Elective Credit	(3)	Equiv
ENGR 1117 Into to AutoCAD	(2)	TADT 1460 2D Graphics and Laser Etching	(3)	Equiv
ENGR 2001 Solids Modeling	(3)	General Elective Credit	(3)	Equiv
ENGR 2102 Dynamics	(3)	PHYS 2220 Dynamics	(3)	Equiv
ENGR 2103 Mech. of Materials	(3)	TADT 2461 Parametric 3D Modeling	(3)	Waiv
ENGR 2104 Fluid Mechanics	(3)	General Elective Credit	(3)	Equiv
ENGR 2105 Thermodynamics	(3)	General Elective Credit	(3)	Equiv
ENGR 2106 Circuits I	(4)	PHYS 2530 Circuit Analysis	(4)	Equiv
ENGR 2107 Circuits II	(4)	General Elective Credit	(4)	Equiv
MATH 2106 Probability and Statistics	(3)	General Elective Credit	(3)	Equiv
MATH 2104 Diff Q/ Linear Algebra	(4)	General Elective Credit	(4)	Equiv
PHYS 2203 General Physics III	(4)	General Elective Credit	(4)	Equiv
Major, Emphasis, Unrestricted Electives Total	29	Total College Credits Applied (sum of sections A and B)	60	

Special Notes: BSU recommends students at ICC take the following electives: BIOL 1201, CHEM 1202, ENGR 1117, ENGR 2103. Those not following this recommendation will need to take TADT 1460 and TADT 2461 at the university. ** BIOL 1201 & CHEM 1202 count toward MnTC Goal Area 3. BSU also recommends ENGR 2103 to better prepare them for TADT 3217 Material Science.

SECTION C - Remaining University (receiving) Requirements

	course prefix, number and name	Credits
	General Education credits to complete liberal education requirements	15
	TADT Common Core (15 credits)	
	TADT 3267 Economic and Cost Analysis	3
	TADT 3970 Internship	1
	TADT 4385 Sustainability and Emerging Technologies	3
	TADT 4873 Emphasis Related Capstone	3
	TADT 4878 Quality Assurance	3
	TADT 4970 Internship	2
	Engineering Technology Core (23Cr.)	
	TADT 1210 Introduction to Manufacturing Processes I	3
	TADT 1220 Introduction to Manufacturing Processes II	3
	TADT 2100 Impact of Technology	2

	TADT 3217 Material Science and Metallurgy	3	
	TADT 3277 Programmable Logic Controllers	3	
	TADT 3462 Computer Controlled Machining	3	
	TADT 3537 Industrial Design and Innovation	3	
	TADT 4778 Advanced Topics in Technology	3	
	Select 7 elective credits from the following		
	TADT 3250 Print Reading and Project Documentation (3 Cr)	7	
	TADT 4589 Advanced Prototype Project (3 Cr)		
	TADT 4880 Total Quality Management (3 Cr)		
	TADD 3440 3D Digital Foundations (4 Cr)		
TADD 3450 History of Modern Design (4 Cr)			
TADD 3579 Digital Print/Branding and Publication (4 Cr)			
University unrestricted elective credits not counted elsewhere (if none enter 0)			
Total Remaining University Credits²		60	

Special Notes, if any: Students will need to work with their advisor at BSU to develop a plan ensuring the 15 additional credits of liberal education will meet all goal area requirements. Some of these courses will need to fill multiple goal areas. 3 of the 15 liberal education credits must be upper division to meet graduation requirements of 40 upper division credits.

SECTION D - Summary of Total Program Credits			
College (sending) Credits		University (receiving) Requirements	
MnTC/General Education	31		
Major, Emphasis, Unrestricted Electives or Other	29		
Total College Credits	60	Total College Credits Applied	60
		Remaining credit to be taken at the university (receiving institution)	60
		Total Program Credits	120
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	Richard Kangas	<i>R Kangas</i>	1/18/17
Title			
University	Name	Signature	Date
Chief Academic Officer	Michael F. Anderson	<i>Michael F. Anderson</i>	1-6-17
Title			
DARS Encoder	Ben Hodgson	<i>Ben Hodgson</i>	1-9-17

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