

## **Articulation Agreement**

This Articulation Agreement shall exist between Lake Superior State University (LSSU) in Sault Ste. Marie, Michigan and Northwestern Michigan College (NMC) in Traverse City, Michigan. The purpose of this Agreement shall be to facilitate the transfer of credits from NMC to LSSU leading to a Bachelor of Science Degree in Robotics Engineering granted by Lake Superior State University. In collaboration with this Agreement, credits taken at LSSU will transfer to NMC to satisfy any qualifying degree or certificate requirements offered by NMC. Students must complete individual courses with a 'C' (2.0) or better at NMC for a course to transfer to LSSU.

Any student who declares a major in the aforementioned field of study will be allowed to complete the program of study provided they remain enrolled during concurrent academic periods. This Articulation Agreement shall be reviewed by the academic transfer departments/programs at each institution every four (4) years from the date of this agreement. The Head/Chair of the Department/School/Program for each institution shall sign and date the review and renewal of this Articulation Agreement.

The attached document shall outline the required courses and their transfer equivalencies between NMC and LSSU. These course transfer equivalencies shall remain in effect during the duration of this Agreement and any changes shall be approved mutually by both Institutions under the terms of this Articulation. This Articulation Agreement may be terminated by either NMC or LSSU after consultation between both Institutions but at no time during the course of any academic session.

# Lake Superior State University—Transfer Guide

## NORTHWESTERN MICHIGAN COLLEGE

Transfer Major:

**NMC: Engineering Certificate + Michigan Transfer Agreement**  
to  
**LSSU: B.S. Robotics Engineering**

**Contacts:**

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**Valid For:**

**2019-2023**  
Continuing with review and renewal every 4 years

NMC Courses			LSSU Equivalency			Additional LSSU Courses			
CHM-150	General Chemistry I	5	CHEM-115	General Chemistry	5	EGEE-125	Digital Fundamentals	4	
EGR-101	Intro to Engineering	1	EGNR-101	Intro to Engineering	1	EGEE-210	Circuit Analysis	4	
EGR-113	Engineering Graphics I	3	EGMT-142	Overview of Solid Modeling*	2*	EGME-141	Solid Modeling	3	
EGR-202	Mechanics of Materials	3	EGME-225	Mechanics of Materials	3*	EGNR-140	Lin. Algebra/Num. Methods	2	
EGR-203	Dynamics	4	EGEM-320	Dynamics	3*	EGNR-265	"C" Programming	3	
EGR-201	Statics	3	EGEM-220	Statics	3	EGNR-340	Adv. Num. Method for Eng.	1	
MTH-141	Calculus I	5	MATH-151	Calculus I	4	EGNR-490	Special Topics in Engineering	4	
MTH-142	Calculus II	5	MATH-152	Calculus II	4	EGNR-491	Engineering Design Project I	3	
MTH-241	Calculus III	5	MATH-251	Calculus III	4	EGNR-495	Engineering Design Project II	3	
MTH-251	Differential Equations	4	MATH-310	Differential Equations	3	EGRS-215	Introduction to Robotics	2	
PHYS-221	Prob and Princ of Physics I	5	PHYS-231	Applied Physics I	4	EGRS-365	Prog. Logic Controllers	3	
PHYS-222	Prob and Princ of Physics II	5	PHYS-232	Applied Physics II	4	EGRS-372	Mobile Robotics	4	
				Additional Credits	8	EGRS-385	Robotics Engineering	4	
	Michigan Transfer Agreement (MTA)					EGRS-430	Systems Integ & Machine Visior	4	
	Additional MTA Course (minimum)	20		General Education Requirements Met	20	EGRS-435	Autmoated Manuf. Systems	3	
	*see attached MTA sheet					EGRS-460	Control Systems	4	
	• 2 Courses in English Comp.					MATH-308	Probability and Statistics	3	
	• 1 Course in Mathematics	Met		*not required for the B.S. Robotics			Support Elective	3	
	• 2 Courses in Social Sci			Engineering degree but applicable as					
	• 2 Course in Humanities/Fine Arts			electives					
	• 2 Courses in Natural Science	Met							
	including one with lab								
							2-yr plan of study at LSSU for above		
							courses is attached.		
<b>TOTAL NMC CREDITS</b>		<b>68</b>	<b>TOTAL LSSU TRANSFER CREDITS</b>		<b>68</b>	<b>TOTAL ADDITIONAL LSSU CREDITS</b>			<b>57</b>

Course schedules and offerings throughout the year are subject to change without notice. Students are expected to work closely with their advisors in planning out their academic schedules.

Any of the Northwestern Michigan College courses listed above will transfer to Lake Superior State University according to the transfer guide above only with a grade of 'C' or better.

Any student completing the Engineering Certificate at Northwestern Michigan College is guaranteed admission into the B.S. Robotics Engineering program at Lake Superior State University.

**APPROVED BY:**

  
Dr. Lynn Gillette

6/14/19  
(Date)

Provost  
Lake Superior State University

  
Mr. Stephen Siciliano

Vice President for Educational Services  
Northwestern Michigan College

6/21/2019  
(Date)