

Lake Superior State University — Articulation Agreement

NORTHWESTERN MICHIGAN COLLEGE

Transfer Major:

NMC: Engineering Transfer Program + Michigan Transfer Agreement
to
LSSU: B.S. Robotics Engineering (RE)

Contacts:

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Valid For: 2023-2027

Continuing with review and renewal every 4 years

NMC Courses

LSSU Equivalency

Additl. LSSU Courses for B.S. Degree

NMC Courses		LSSU Equivalency		Additl. LSSU Courses for B.S. Degree	
CHM-150 (also L & R) General Chemistry I	5	CHEM-115 General Chemistry	5	EGEE-125 Digital Fundamentals	4
MTH-141 Calculus I	5	MATH-151 Calculus I	4+1	EGEE-211 Circuit Analysis Lab	1
MTH-142 Calculus II	5	MATH-152 Calculus II	4+1	EGNR-140 Lin. Algebra/ Num. Methods	2
MTH-241 Calculus III	5	MATH-251 Calculus III	4+1	EGNR-340 Adv. Num. Method for Eng.	1
MTH-251 Differential Equations	4	MATH-310 Differential Equations	3+1	EGNR-491 Engineering Design Project I	3
PHY-221 (also L&R) Prob & Prin. of Phys. I	5	PHYS-231 Applied Physics I	4+1	EGNR-495 Engineering Design Project II	3
PHY-222 (also L&R) Prob & Prin of Phys. II	5	PHYS-232 Applied Physics II	4+1	EGRS-105 Robotics Appl & Trends	1
				EGRS-215 Introduction to Robotics	2
Sub-total	34	Sub-total	34	EGRS-305 Robotics Safety & Cobots	3
Recommended Electives (13 credits)				EGRS-365 Prog. Logic Controllers	3
EGR-101 Intro to Engineering	1	Waive EGNR-101 Intro to Engineering		EGRS-372 Mobile Robotics	4
EGR-111 Intro to Computer Science	3	EGNR265 "C" Programming	3	EGRS-385 Robotics Engineering	4
EGR-113 Engineering Graphics I	3	EGME-141 Solid Modeling	3	EGRS-430 Systems Integ & Mach. Vision	4
EGR-201 Statics	3	EGEM-220 Statics	3	EGRS-435 Automated Manuf. Systems	3
EGR-211 Electrical Circuits	3	EGEE-277 Tech Elective (Waive EGEE210 Circuit Analysis - lecture only)	3	EGRS-460 Control Systems	4
Courses listed below are useful but not reqd. for transfer to LSSU's RE Program	13	Addl. Electives that can be transferred	12	MATH-308 Probability and Statistics	3
EGR-202 Mechanics of Materials	3	EGME-225 Mechanics of Materials	3	Technical Elective Credits	7
EGR-203 Dynamics	4	EGEM-320 Dynamics	3+1		
EGR-220 Engineering Practice I	2	Technical Elective	2		
EGR-221 Material Science	3	EGME-275 Materials Engineering	3		
EGR-232 Introductory Thermodynamics	3	Technical Elective	3		
	15		15		
Additional Michigan Transfer Agreement (MTA) Courses Reqd. (min.)	20	Gen. Ed. Requirements at LSSU - Met	20		
* see attached MTA requirements sheet					
• 2 Courses in English Comp.	8				
• 1 Course in Mathematics	Met				
• 2 Courses in Social Science/Grp 1	6	MTA requirements can also be completed at LSSU.			
• 2 Courses in Humanities/Grp 1	6				
• 2 Courses in Natural Science including one with a lab	Met				
TOTAL NMC CREDITS	67-82	TOTAL LSSU TRANSFER CREDITS	66-81	Min. ADDL. LSSU CREDITS REQD.	52

Note: It is sufficient if overall 13 EGR credits from NMC are transferred (incl EGR201) to complete LSSU's Robotics Engineering B.S. degree in 2 years. But, additional EGR credits from NMC reduces course load at LSSU. See 2-yr plan of study at LSSU attached.

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

Any of the NMC courses listed above will transfer to LSSU with a grade of 'C-' (1.7) or better.

Any student completing the Engineering Transfer program at NMC is guaranteed admission into LSSU's B.S. Robotics Eng. program

APPROVED BY:

Kimberly Muller

3/5/24

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3/7/2024

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