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 — Articulation Agreement

## NORTHEASTERN MICHIGAN COLLEGE

### Transfer Major:

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

### Contacts:

- Dr. Jerry Dobek  
  Sciences Department Head  
  Northwestern Michigan College  
  (231) 995-1271 or jdobek@nmc.edu

- Dr. Paul Weber, Chair  
  School of Engineering and Technology  
  Lake Superior State University  
  (906) 635-2031 or pweber@lssu.edu

### Valid For: 2019-2023

Continuing with review and renewal every 4 years

### NMC Courses

<table>
<thead>
<tr>
<th>NMC Courses</th>
<th>LSSU Equivalency</th>
<th>Additional LSSU Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM-150 General Chemistry I</td>
<td>CHEM-115 General Chemistry</td>
<td>EGE-125 Digital Fundamentals</td>
</tr>
<tr>
<td>EGR-101 Intro to Engineering</td>
<td>EGME-142 Overview of Solid Modelling 1*</td>
<td>EGE-210 Circuit Analysis</td>
</tr>
<tr>
<td>EGR-113 Engineering Graphics I</td>
<td>EGME-225 Mechanics of Materials 3*</td>
<td>EGME-141 Solid Modeling 3</td>
</tr>
<tr>
<td>EGR-203 Dynamics</td>
<td>EGEM-220 Statics 3</td>
<td>EGRN-265 &quot;C&quot; Programming 3</td>
</tr>
<tr>
<td>MTH-142 Calculus II</td>
<td>MATH-151 Calculus II 4</td>
<td>EGGR-490 Special Topics in Engineering 4</td>
</tr>
<tr>
<td>MTH-241 Calculus III</td>
<td>MATH-251 Calculus III 4</td>
<td>EGNR-491 Engineering Design Project I 3</td>
</tr>
<tr>
<td>MTH-251 Differential Equations</td>
<td>MATH-310 Differential Equations 3</td>
<td>EGNR-495 Engineering Design Project II 3</td>
</tr>
<tr>
<td>PHY-221 Prob and Princ of Physics I</td>
<td>PHYS-231 Applied Physics I 4</td>
<td>EGRS-215 Introduction to Robotics 2</td>
</tr>
<tr>
<td>PHY-222 Prob and Princ of Physics II</td>
<td>PHYS-232 Applied Physics II 4</td>
<td>EGRS-365 Prog. Logic Controllers 3</td>
</tr>
<tr>
<td>Michigan Transfer Agreement (MTA) Additional MTA Courses (minimum)</td>
<td>General Education Requirements Met 20</td>
<td>EGRS-372 Mobile Robotics 4</td>
</tr>
<tr>
<td>* see attached MTA sheet</td>
<td>Met</td>
<td>EGRS-385 Robotics Engineering 4</td>
</tr>
</tbody>
</table>

* not required for the B.S. Robotics Engineering degree but applicable as electives

### TOTAL NMC CREDITS

68

### TOTAL LSSU TRANSFER CREDITS

68

### TOTAL ADDITIONAL LSSU CREDITS

57

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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 according to this Agreement only with a grade of 'C' (2.0) or better.

Any student completing the Engineering Certificate at NMC is guaranteed admission into the B.S. Robotics Engineering program at LSSU.

### APPROVED BY:

Dr. Lynn Gillette  
Provost  
Lake Superior State University

Dr. Stephen N. Siciliano  
Vice President for Educational Services  
Northwestern Michigan College

Lake Superior State University — Admissions Office  
1-888-800-LSSU ext. 2231 — www.lssu.edu
Michigan Transfer Agreement (MTA)

WHAT IS MTA?
In an effort to improve the transferability of college courses between Michigan public community colleges and universities, the Michigan Transfer Agreement (MTA) took effect beginning in the fall of 2014.
To fulfill the MTA, students must successfully complete at least 30 Group 1 semester credit hours. Students must earn at least a grade of 2.0 in each MTA course in order for it to count towards the minimum MTA requirements. Credits should be distributed as follows:

- **English Composition**: Two courses
- **Humanities**: Two Group 1 courses taken from two different departments excluding studio and performance classes
- **Mathematics**: One Group 1 course (MTH 120 or higher)
- **Natural Sciences**: Two Group 1 courses from two different departments (one course must include a lecture/laboratory)
- **Social Sciences**: Two Group 1 courses from two different departments

Students are required to complete at least one for-credit course at NMC before requesting the MTA Satisfied endorsement. It must be a college-level course but need not be from the areas represented in the MTA. When students have completed the MTA requirements, they should notify the NMC Records Office so their transcripts will be noted “MTA SATISFIED.” Students are not required to complete an associate's degree in order to satisfy the MTA. Some students select a course of study that requires a four-year degree of which two years may be completed at NMC through completion of the Associate in Science and Arts (ASA) degree. Students completing the ASA will also complete the MTA.

WHAT IS/WAS THE MACRAO AGREEMENT?
Students who began prior to fall of 2014 will be able to complete the existing MACRAO agreement until the end of summer 2019 as long as they are a continuous student (take at least one course each year). If a student already has the MACRAO agreement stamp on their transcript, it is expected that the receiving institution will still honor it. Students may be able to receive both the MACRAO and the MTA through summer 2019.
Contact the Records & Registration Office or the Advising Center to learn more about how MTA and MACRAO apply to your situation.