

Lake Superior State University — Articulation Agreement

NORTHWESTERN MICHIGAN COLLEGE

Transfer Major: **NMC: ASE Pre-Engineering** to **LSSU: B.S. Mechanical Engineering**

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| Contacts: | Dr. James D Smith Engineering Faculty Northwestern Michigan College (231) 995-1270 or jsmith@nmc.edu Dr. Paul Weber, Chair, SET, LSSU (906) 635-2031 or pweber@lssu.edu | Valid For: 2023-2027 Continuing with review and renewal every 4 years |
| NMC Courses | LSSU Equivalency | Additional LSSU Courses |
| ENG 111 English Composition 4 ENG 112 English Composition 4 Humanities (Any one course) 3 MTH-141 Calculus I 5 MTH-142 Calculus II 5 MTH-241 Calculus III 5 MTH-251 Differential Equations 4 PHYS-221 (also L&R) Prob & Prin of Phys I 5 PHYS-222 (also L&R) Prob & Prin of Phys II 5 CHM-150 (also L & R) General Chemistry I 5 Social Science (One course) 3 Sub-total 48 Directed Electives (min. 25 cr) EGR-101 Intro to Engineering 1 EGR-111 Intro to Computer Science 3 EGR-113 Engineering Graphics I 3 EGR-201 Statics 3 EGR-202 Mechanics of Materials 3 EGR-203 Dynamics 4 EGR-221 Material Science 3 EGR-211 Electrical Circuits 3 EGR-220 Engineering Practice I 2 Sub-total 25 Michigan Transfer Agreement (MTA) For MTA, Additional Courses Req'd. - 6 1 Course in Social Science/Grp 3 1 Course in Humanities/Grp 3 | ENGL110 First Year Composition I 3 ENGL111 First Year Composition II 3 Humanities 3 MATH-151 Calculus I 4 MATH-152 Calculus II 4 MATH-251 Calculus III 4 MATH-310 Differential Equations 3 PHYS-231 Applied Physics I 4 PHYS-232 Applied Physics II 4 CHEM-115 General Chemistry 5 Social Science 3 Sub-total 40 EGNR-101 Intro to Engineering 1 EGNR265 "C" Programming 3 EGME-220 Statics 3 EGME-225 Mechanics of Materials 3 EGEM-320 Dynamics + EGEM377 3+1 EGME-275 Engineering Materials 3 EGEE-277 Tech Elective (Waive Circuit Analysis - lecture only) 3 EGNR277 Tech Elective 2 Sub-total 25 General Ed. Requirements If MTA is not met, additional 6 credits will be required to complete MTA requirements 6 | EGME-110 Manufacturing Processes 3 EGNR-140 Linear Alg / Num Methods 2 EGME-276 Strength of Materials Lab 1 MATH-308 Probability and Statistics 3 EGME-350 Machine Design 4 EGEE-211 Circuit Analysis Lab 1 EGNR-340 Num Methods for Engineers 1 EGME-337 Thermodynamics 4 EGME-338 Fluid Mechanics 3 EGME-431 Heat Transfer 3 EGME-432 Thermal Fluids Lab 2 EGRS-460 Control Systems 4 EGNR-491 Engineering Design Project I 3 EGNR-495 Engineering Design Project II 3 Sub-total 37 SENIOR SEQUENCE (Select 1) 6 - 10 Industrial: EGNR491 & 495 - 6 Co-op: EGNR450, 451, and 491 - 10 Research: EGNR260, 460, 461 - 8 TECHNICAL ELECTIVE (Select 1 area from below) 17-19 Vehicle Systems (18-19 cr): EGEE280, EGME240, EGME310, EGME415, EGME425, & [EGME442 or EGRS461] Robotics & Automation (17-18 cr): EGRS365, EGRS385, EGRS430, EGRS435, & [3-4 cr Approved Tech Elective] General: 17 cr: Approved Tech Electives, min (2) 400-level; max (2) 200-level courses Approved Tech Electives: EGME 240, 310, 415, 425, 442; EGME 216; EGNR 261, 361, 310, 346, 490; EGRS 305,325,372,375,385, 430,435,461 EGEE 280, 310, 330, 345, 411 |
| TOTAL NMC CREDITS 73-79 | TOTAL Equivalent LSSU CREDITS 65-71 | ADDITIONAL LSSU CREDITS 60-66 |

- 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. Mechanical Eng. Program

APPROVED BY::

Kimberly Muller

3/5/24

Dr. Kimberly Muller
 Interim Provost and
 Vice President for Academic Affairs
 Lake Superior State University

(Date)

Stephen N. Siciliano

3/7/2024

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

(Date)