ARTICULATION AGREEMENT with GUARANTEED ADMISSION

between

COLLEGE OF LAKE COUNTY
Associate in Engineering Science

and

MILWAUKEE SCHOOL OF ENGINEERING®
Bachelor of Science Programs

Effective Fall 2026

This articulation agreement aims to enhance transfer opportunities for College of Lake County (CLC) students seeking to continue their education at Milwaukee School of Engineering (MSOE). Through collaboration among faculty, student services, and administration, students will have well-defined course equivalencies to help them achieve their academic goals.

Students pursuing the **Associate in Engineering Science** (A.E.S.) degree at CLC are encouraged to complete the degree prior to transfer to ensure a smooth transition and maximize credit applicability. Students who meet MSOE's admission requirements and the conditions specified in this agreement will be guaranteed admission into one of the following MSOE bachelor's degree programs, as specified in the applicable program addendum:

Bachelor of Science in Civil Engineering
Bachelor of Science in Computer Engineering
Bachelor of Science in Computer Science
Bachelor of Science in Electrical Engineering
Bachelor of Science in Mechanical Engineering
Bachelor of Science in Software Engineering

Program-specific course equivalency requirements are detailed in the addenda attached to this agreement.

PROVISIONS OF THIS AGREEMENT:

1. **Admissions & Eligibility:**

   It is the student's responsibility to meet the current admission requirements of MSOE at the time of entry. Information on transfer admissions requirements may be found at *https://www.msoe.edu/transfer*

   The terms of this agreement apply to College of Lake County (CLC) students who:

   a) Complete course requirements in the Associate in Engineering Science program at CLC with a grade of C or better,
   b) Complete additional specified courses at CLC, as outlined in this agreement, including those specific to the intended major, with a grade of C or better, and
   c) *Achieve a cumulative grade point average (CGPA) of 3.00 or higher, as reported on the CLC transcript, meeting MSOE's CGPA transfer admission requirements for computing and engineering programs.
      **MSOE evaluates CGPA for admission based on the transcript from the institution where the student most recently completed at least 12 credits.*

   CLC students who meet all transfer requirements will be guaranteed admission into their intended MSOE program and must fulfill the catalog requirements in effect for the year they begin.

2. **Advising & Recruitment**

   MSOE and CLC will provide academic advising to CLC students inquiring about MSOE programs. Students will be connected with transfer admission counselors and as needed, with program faculty prior to transfer. MSOE and CLC will share materials, catalogs, and other information to facilitate their understanding of requirements and programs. CLC will assist MSOE personnel in arranging recruitment events on its campuses, such as appropriate classroom settings and transfer fairs.

3. **Marketing**

   Each institution must obtain written approval before using the other's name in any promotional or marketing materials related to this agreement. All materials must specify that the transfer is to the specific engineering program at MSOE. Designated contacts in each institution's marketing departments will coordinate and approve these materials. Each institution may link to this agreement and the other's website with prior notice. Guidelines for using MSOE's name and logo are provided in this agreement.

4. **Accreditation**

   CLC and MSOE will work together to assess student learning outcomes as needed, supporting the effectiveness of this articulation agreement and providing documentation for program accreditation. MSOE may request samples of assessment materials, such as graded assignments and exams, with student names removed to protect privacy. These materials cannot be shared with anyone outside of the program faculty, administrators involved in the articulation courses, and accreditation agency visitors without written permission from the other institution.

   This agreement may be terminated by either CLC or MSOE if either fails to maintain regional accreditation or if the MSOE engineering program accreditation is discontinued or terminated.

5. Periodic Review

An active articulation agreement begins at the commencement of the fall 2026 semester and will remain in effect through fall 2031, at which point it will be subject to renewal. Given the evolving nature of engineering curricula, MSOE and CLC will conduct an annual review of engineering course equivalencies to ensure continued alignment with program requirements. Any curriculum changes impacting the articulation pathway will not take effect during an active academic year unless both the MSOE Program Director and the designated representative at CLC provide explicit consent, or if changes are required by accreditation or institutional mandates. Minor revisions (such as course renumbering) are permitted but must be communicated to the other institution promptly.

6. Cancellation

Both parties agree to give a minimum of one hundred eighty (180) days' written notice in advance if they intend to cancel this agreement. CLC students who apply to MSOE before the cancellation date will still be allowed to transfer credits according to the terms of this agreement.

7. Course Articulation Guides

MSOE and CLC have collaborated to create guides to serve as a resource for students, with every effort made to ensure the information is accurate.

8. Transfer Scholarships

MSOE is committed to supporting transfer students and offers a substantial merit-based scholarship. This scholarship is awarded based on cumulative GPA and is available to eligible students transferring from CLC. Transfer students are automatically considered for this scholarship upon admission, with no separate application required.

The transfer scholarship is renewable each year for students who continue to meet MSOE's Satisfactory Academic Progress requirements, provided they remain enrolled full-time (up to a maximum of six years). For the most up-to-date information on scholarship opportunities and eligibility criteria, students are encouraged to visit our scholarship webpage or contact the MSOE Financial Aid Office.

For more information about COLLEGE OF LAKE COUNTY (CLC) and the Associate in Engineering Science Degree:

Administrative person(s) responsible for coordinating curricular matters and articulation agreements and renewals:

Dr. Jan Edwards
Engineering Department Chair
847-543-2918
Jedwards1@clcillinois.edu

For more information about Milwaukee School of Engineering (MSOE) and the bachelor's degree programs:

Administrative person(s) responsible for coordinating curricular matters and articulation agreements and renewals:

Dr. Kelsey Johnson
Director of Academic Partnerships
414-277-7194
Johnsonkd@msoe.edu

Person(s) designated for coordination and signoff of public relations/marketing and other promotional materials:

Sebastian Thachenkary (for sign-off)
Vice-President Marketing & Community Engagement
414-277-7141
thachenkary@msoe.edu

JoEllen Burdue
Senior Director of Communications & Media Relations
414-277-7117
burdue@msoe.edu

GUIDELINES FOR USE OF THE MILWAUKEE SCHOOL OF ENGINEERING® NAME AND/OR LOGO

In an effort to meet standards set by our accreditation agencies, to minimize any confusion on the part of prospective or current students, and to protect the use of MSOE's name and logo, it is imperative that use of or reference to our name or programs be limited to those deemed appropriate by MSOE. As specified in the articulation agreement, MSOE's Vice President of Marketing and Community Engagement or his/her designee will approve any and all narrative and graphic representation containing MSOE's name, logo or reference to our programs before it is published or distributed in any way.

To expedite the process of developing content for use in promotional literature or digital platforms, the following minimum guidelines should be followed. Noncompliance will result in disapproval.

Any promotional literature or digital media content will clearly indicate that the transfer, upon which this articulation agreement is based, is into the Associate Engineering Transfer Pathway of the named engineering program, not the traditional pathway of the B.S. program, at MSOE. All people involved with the promotion of this transfer arrangement will clearly maintain this distinction to all audiences at all times.

Our preferred reference is MSOE, however, for clarity purposes it is sometimes appropriate to use Milwaukee School of Engineering (MSOE), then use MSOE in later references of the same communication. Furthermore, MSOE will be referred to as a university. In no instance shall MSOE be referred to as a college or school. Although MSOE refers to itself as a university and the word is present in the logo, the word "university" is not part of its name.

The official MSOE logo appears as below and should be used on all materials and on all digital platforms unless it would be so small that "UNIVERSITY" would be illegible. If that is the case, contact MSOE's Marketing Communications Department for an alternative solution.

In materials where color is used, MSOE's logo will always be red and black. MSOE red is PMS 200. This can be created in CMYK by using the formula C-3, M-100, Y70, K-12. For screens, RGB is used which is R-197, G-5, B-12. Finally, for the web the HEX code is #C5050C.

Official logos:





When possible the two-color logo should be used. For materials with a dark background there is a "reversed" version of this two-color logo. For black and white materials, the black logo should be used. If the background is dark, there is a "reversed" version of the black logo as well. Finally, for materials with a red background there is a special version of the logo in white. Reach out to MSOE's Marketing Communications to request any of these options.

The name Milwaukee School of Engineering®, the acronym MSOE® and the MSOE logo are all registered trademarks. The first time the name or acronym appear in any document they must have the ® mark. It is not necessary to include the ® mark with subsequent mentions in the same document or page. The logos have the ® mark embedded.

Given the need to provide clarity as to the limitations of the articulation agreement and avoid potential misunderstandings, any use of the MSOE logo in related marketing communications in print or digital form (brochures, catalogs, Web pages, blogs, letters, e-mail, social media, posters, etc.) must comply with the MSOE Brand standards and be reviewed and approved by MSOE. Visit *https://www.msoe.edu/faculty- staff/marketing* to obtain the brand standards.

Contact the Vice President of Marketing & Community Engagement or Senior Director of Communications & Media Relations indicated on the Institution-Specific Information section in this articulation agreement with any questions you may have and for needed approvals.

SIGNATORIES

Sep 28, 2026

This agreement signed and dated this ____day of _____, 20___, has been thoroughly reviewed and approved by both institutions. The agreement is in effect for the 2026–2027 academic year.

Milwaukee School of Engineering

box SIGN 4YJX5L35-42Q5X96V

Dr. Joseph Tranquillo
Executive Vice President of Academics

box SIGN 158Y9QKW-42Q5X96V

Dr. Christopher GauthierDickey
Department Head, Diercks School of Advanced Computing

Sudhir Kaul
box SIGN 1V7K7R82-42Q5X96V

Dr. Sudhir Kaul
Department Chair, Mechanical and Industrial Engineering

DeAnna Leitzke
box SIGN 46L65JX4-42Q5X96V

Dr. DeAnna Leitzke
Department Chair, Civil and Architectural Engineering and Construction Management

box SIGN 4LYRY761-42Q5X96V

Dr. Sheila Ross
Department Chair, Electrical, Computer, and Biomedical Engineering

College of Lake County

10.8.2026

Dr. Jennifer Davidson
Interim Vice President of Education

Miguel Mireles 10/6/26

Miguel Mireles
Dean of Engineering, Math, & Physical Science

Jan Edwards 10/6/26

Dr. Jan Edwards
Department Chair, Engineering

Addendum A: Civil Engineering (BSCVE)

Satisfaction of the following CLC courses is assumed upon entry into the Civil Engineering program at MSOE. Any course requirement that is not met must be satisfied at MSOE or with approved transfer credit.

CLC Course Number	CLC Course Name	Equivalent MSOE Course Number
Communication & General Education		
ENG 121	English Composition 1	COM 1001
ENG 126	Scientific & Technical Communication	COM 2001
SOC 121 (suggested)	Introduction to Sociology - See appendix for more options	SOC 1001
ECO 222 (suggested)	Principles of Microeconomics See appendix for more options	BUS 2221
PHI 125 (suggested)	Intro to Ethics - See appendix for more options	HUM 0103
Mathematics & Natural Science		
MTH 145	Calculus & Analytic Geometry I	MTH 1110
MTH 146	Calculus & Analytic Geometry II	MTH 1120
MTH 246	Calculus & Analytic Geometry III	MTH 2130
MTH 227	Differential Equations	MTH 2140
CHM 121	General Chemistry I	CHM 1010
PHY 123	Physics for Science & Engineering I	PHY 1110
PHY 124	Physics for Science & Engineering II	PHY 1120
Civil Engineering Courses		
EGR 120 **AND** CLC 120	Intro to Engineering **AND** College Success Seminar	CAE 1811
CSC 128	Computer Science I	Computer Science Elective
EGR 121	Engineering Design Graphics	Free Elective
EGR 125	Engineering Statics	CAE 2513
EGR 222	Mechanics of Materials	CAE 2512
EGR 225 or 260	One more EGR course	Technical elective

ADDITIONAL BSCVE TRANSFER COURSES AVAILABLE THROUGH CLC

CLC Course Number	CLC Course Name	Equivalent MSOE Course Number
Communication & General Education		
CMM 121	Fundamentals of Speech	COM 3001

Addendum A: Civil Engineering (BSCVE)

Courses remaining in the Civil Engineering program (BSCVE) at MSOE, assuming successful completion of all courses listed on the preceding page.

MSOE Course Number	MSOE Course Name	Semester Credits
Communication & General Education		
COM 3001	Professional Presentations	3
Mathematics & Natural Science		
MTH 2480	Probability & Statistics	3
BSCVE Program		
CAE 1001	Professional Growth I	0
CAE 2001	Professional Growth II	0
CAE 3001	Professional Growth III	0
CAE 1873	Construction Materials	3
CVE 2853	Civil 3D	3
CAE 1874	Construction Methods	3
CAE 2711	Fluid Mechanics	3
CON 3001	Principles of Cont. Project Management	3
CAE 2012	Surveying Concepts	1
CVE 4901	Capstone: Alternatives Analysis	4
CAE 4881	Sustainability & Resilience	3
CVE 3301	Principles of Soils & Geotech. Engineering	3
CVE 4902	Capstone: Detailed Design	4
CSC 2661	Python for AI	1
Elective	Upper Division Civil Engineering	3
Elective	Upper Division Civil Engineering	3
Elective	Upper Division Civil Engineering	3
Elective	Upper Division Civil Engineering	3
Elective	Upper Division Civil Engineering	3
Elective	Economics	3
Elective	Graphics	3
Elective	Technical	3
Total		**61**

Addendum B: Computer Engineering (BSCE)

Satisfaction of the following CLC courses is assumed upon entry into the Computer Engineering program at MSOE. Any course requirement that is not met must be satisfied at MSOE or with approved transfer credit.

CLC Course Number	CLC Course Name	Equivalent MSOE Course Number
Communication & General Education		
ENG 121	English Composition 1	COM 1001
ENG 126	Scientific & Technical Communication	COM 2001
ECO 222	Principles of Microeconomics	BUS 2221
PHI 125 (suggested)	Intro to Ethics - See appendix for more options	HUM 0103
SOC 121 (suggested)	Introduction to Sociology - See appendix for more options	SOC 1001
Mathematics & Natural Science		
MTH 145	Calculus & Analytic Geometry I	MTH 1110
MTH 146	Calculus & Analytic Geometry II	MTH 1120
MTH 246	Calculus & Analytic Geometry III	MTH 2130
MTH 227	Differential Equations	MTH 2140
CHM 121	General Chemistry I	CHM 1010
PHY 123	Physics for Science & Engineering I	PHY 1110
PHY 124	Physics for Science & Engineering II	PHY 1120
Computer Engineering Courses		
CSC 128	Computer Science I	CPE 1040
CSC 148	Computer Science II	CPE 1140
MTH 244	Discrete Mathematics	MTH 2310
EET 223 **OR**	Intro to Digital Electronics **OR**	CPE 1500
EGR 260	Circuit Analysis	ELE 2021
MTH 225	Linear Algebra	MTH 2340

ADDITIONAL BSCE TRANSFER COURSES AVAILABLE THROUGH CLC

Complete two of these additional courses to facilitate a four-semester completion at MSOE

CLC Course Number	CLC Course Name	Equivalent MSOE Course Number
Communication & General Education		
CMM 121	Fundamentals of Speech	COM 3001
ECO 221	Macroeconomics	BUS 2222

Addendum B: Computer Engineering (BSCE)

Courses remaining in the Computer Engineering program (BSCE) at MSOE.

*Courses marked with an asterisk are available at CLC. Completion prior to MSOE enrollment will facilitate a faster time to graduation.

MSOE Course Number	MSOE Course Name	Semester Credits
Communication & General Education		
*COM 3001	Professional Presentations	3
*BUS 2222	Macroeconomics	3
*Exhibit Curiosity CLO	Many Options	3
Mathematics & Natural Science		
MTH 2480	Probability & Statistics	3
BSCE Program		
IDS 2020	Career Development	0
CPE 1500 **OR** ELE 2001	Digital Logic **OR** Electric Circuits I	4
CPE 2600	Systems Programming	4
CPE 1510	Computer Architecture & Assembly Language	4
CPE 2610	Embedded Systems	4
ELE 2011	Electric Circuits II	4
ELE 3101	Electronics I	4
ELE 3300	Signals & Systems	3
ELE 3320	Digital Signal Processing	3
CPE 3600	Embedded Systems Design	4
CPE 3300	Computer Networking	4
CPE 4800	Information Security	4
CPE 4901	CE Senior Design Project I	3
CPE 4902	CE Senior Design Project II	3
Elective	Program Elective	3
Elective	Program Elective	3
Elective	Free	3
Total		69

Addendum C: Computer Science (BSCS)

Satisfaction of the following CLC courses is assumed upon entry into the Computer Science program at MSOE. Any course requirement that is not met must be satisfied at MSOE or with approved transfer credit.

CLC Course Number	CLC Course Name	Equivalent MSOE Course Number
Communication & General Education		
ENG 121	English Composition 1	COM 1001
ENG 126	Scientific & Technical Communication	COM 2001
SOC 121 (suggested)	Introduction to Sociology - See appendix for more options	SOC 1001
ECO 222 (suggested)	Principles of Microeconomics See appendix for more options	BUS 2221
PHI 125 (suggested)	Intro to Ethics - See appendix for more options	HUM 0103
Mathematics & Natural Science		
MTH 145	Calculus & Analytic Geometry I	MTH 1110
MTH 146	Calculus & Analytic Geometry II	MTH 1120
MTH 246	Calculus & Analytic Geometry III	MTH 2130
MTH 227	Differential Equations	MTH 2140
CHM 121	General Chemistry I	CHM 1010
PHY 123	Physics for Science & Engineering I	PHY 1110
PHY 124	Physics for Science & Engineering II	PHY 1120
Computer Science Courses		
CSC 128 **AND** CSC 148	Computer Science I **AND** Computer Science II	CSC 1110
CSC 248	Data Structures	CSC 2212
MTH 225	Linear Algebra	MTH 2340
MTH 244	Discrete Mathematics	MTH 2310
EGR 121 **OR** EGR 140	Engineering Design Graphics **OR** How to Make Almost Anything	Free Elective

---

ADDITIONAL BSCS TRANSFER COURSES AVAILABLE THROUGH CLC

CLC Course Number	CLC Course Name	Equivalent MSOE Course Number
Communication & General Education		
CMM 121	Fundamentals of Speech	COM 3001
General Education Elective	See Appendix for Options	Choice CLO

Addendum C: Computer Science (BSCS)

Courses remaining in the Computer Science program (BSCS) at MSOE, assuming successful completion of all courses listed on the preceding page.

MSOE Course Number	MSOE Course Name	Semester Credits
Communication & General Education		
COM 3001	Professional Presentations	3
Choice CLO	Many Options	3
Mathematics & Natural Science		
MTH 2480	Probability & Statistics	3
BSCS Program		
IDS 2020	Career Development	0
BUS 2411	Building Inclusive Teams	3
CYB 2001	Introduction to Cybersecurity Principles	3
SWE 2712	Software Tools & Process	3
CSC 1120	Data Structures & Graphic Interfaces	4
CSC 2623	Exploring Data	3
CSC 3310	Algorithms & Advanced Data Structure	3
CSC 3320	Databases	3
CSC 3601	Foundations of Machine Learning	3
CSC 3621	Data Science	3
CSC 3210	Operating Systems	3
CSC 4603	Applied Deep Learning	3
SWE 2512	Web Applications & Networking	4
CSC 4611	Introduction to Deep Learning	3
CSC 4801	Data Science Practicum	3
CSC 4901	Computer Science Capstone I	3
CSC 4902	Computer Science Capstone II	3
Elective	Upper-Level Elective	3
Elective	Upper-Level Elective	3
Total		**65**

Addendum D: Electrical Engineering (BSEE)

Satisfaction of the following CLC courses is assumed upon entry into the Electrical Engineering program at MSOE. Any course requirement that is not met must be satisfied at MSOE or with approved transfer credit.

CLC Course Number	CLC Course Name	Equivalent MSOE Course Number
Communication & General Education		
ENG 121	English Composition 1	COM 1001
ENG 126	Scientific & Technical Communication	COM 2001
SOC 121 (suggested)	Introduction to Sociology - See appendix for more options	SOC 1001
ECO 222 (suggested)	Principles of Microeconomics See appendix for more options	BUS 2221
PHI 125 (suggested)	Intro to Ethics - See appendix for more options	HUM 0103
Mathematics & Natural Science		
MTH 145	Calculus & Analytic Geometry I	MTH 1110
MTH 146	Calculus & Analytic Geometry II	MTH 1120
MTH 246	Calculus & Analytic Geometry III	MTH 2130
MTH 227	Differential Equations	MTH 2140
CHM 121	General Chemistry I	CHM 1010
PHY 123	Physics for Science & Engineering I	PHY 1110
PHY 124	Physics for Science & Engineering II	PHY 1120
Electrical Engineering Courses		
EGR 120 **AND** EGR 260	Introduction to Engineering **AND** Introduction to Circuit Analysis	ELE 1000
EGR 260	Introduction to Circuit Analysis	ELE 2021
EET 223	Digital Logic	CPE 1500
CSC 128	Computer Science I	Free Elective
Electrical Engineering Technical Elective – Choose 1		
MTH 225 (suggested)	Introduction to Linear Algebra	EE Technical Elective (MTH 2340)
MTH 244	Discrete Mathematics	EE Technical Elective (MTH 2310)
EGR 125	Engineering Statics	EE Technical Elective (MEC 2010)

ADDITIONAL BSEE TRANSFER COURSES AVAILABLE THROUGH CLC

CLC Course Number	CLC Course Name	Equivalent MSOE Course Number
Communication & General Education		
CMM 121	Fundamentals of Speech	COM 3001
General Education Elective	See Appendix for Options	Choice CLO

Addendum D: Electrical Engineering (BSEE)

Courses remaining in the Electrical Engineering program (BSEE) at MSOE, assuming successful completion of all courses listed on the preceding page.

MSOE Course Number	MSOE Course Name	Semester Credits
Communication & General Education		
COM 3001	Professional Presentations	3
Choice CLO	Many Options	3
BSEE Program		
IDS 2020	Career Development	0
ELE 1601	Introduction to Programming for EEs	3
ELE 2022	Bridge Electric Circuits	4
ELE 2610	Embedded Systems	4
ELE 3101	Electronics I	4
ELE 3900	Career & Professional Guidance	1
ELE 3201	Electromagnetics & Transmission Lines	4
ELE 3300	Signals & Systems	3
ELE 3401	Electric Power & Machines	4
ELE 3510	Digital Systems	4
ELE 3111	Electronics II	3
ELE 3701	Control Systems	4
ELE 3320	Digital Signal Processing	3
ELE 3310	Introduction to Probability & Random Processes	3
ELE 4901	Senior Design Project I	3
ELE 4902	Senior Design Project II	3
Elective	ECBE or DSAC Technical Elective	3
Elective	ECBE or DSAC Technical Elective	3
PHY 3700	Physics of Electronic Materials & Semiconductor Devices	4
Total		**66**

Addendum E: Mechanical Engineering (BSME)

Satisfaction of the following CLC courses is assumed upon entry into the Mechanical Engineering program at MSOE. Any course requirement that is not met must be satisfied at MSOE or with approved transfer credit.

CLC Course Number	CLC Course Name	Equivalent MSOE Course Number
Communication & General Education		
ENG 121	English Composition 1	COM 1001
ENG 126	Scientific & Technical Communication	COM 2001
SOC 121 (suggested)	Introduction to Sociology - See appendix for more options	SOC 1001
ECO 222 (suggested)	Principles of Microeconomics See appendix for more options	BUS 2221
PHI 125 (suggested)	Intro to Ethics - See appendix for more options	HUM 0103
Mathematics & Natural Science		
MTH 145	Calculus & Analytic Geometry I	MTH 1110
MTH 146	Calculus & Analytic Geometry II	MTH 1120
MTH 246	Calculus & Analytic Geometry III	MTH 2130
MTH 227	Differential Equations	MTH 2140
CHM 121	General Chemistry I	CHM 1010
PHY 123	Physics for Science & Engineering I	PHY 1110
PHY 124	Physics for Science & Engineering II	PHY 1120
Mechanical Engineering Courses		
EGR 120	Intro to Engineering	MEC 1900
CSC 128 **AND** EGR 240	Computer Science I **AND** MATLAB Programming for Engineers	MEC 1910
EGR 121	Engineering Design Graphics	MEC 1602
EGR 125	Engineering Statics	MEC 2010
EGR 225	Engineering Dynamics	MEC 2020
EGR 222	Mechanics of Materials	MEC 2030
EGR 260	Introduction to Circuit Analysis	ELE 2051

ADDITIONAL BSME TRANSFER COURSES AVAILABLE THROUGH CLC

CLC Course Number	CLC Course Name	Equivalent MSOE Course Number
Communication & General Education		
CMM 121	Fundamentals of Speech	COM 3001

Addendum E: Mechanical Engineering (BSME)

Courses remaining in the Mechanical Engineering program (BSME) at MSOE, assuming successful completion of all courses listed on the preceding page.

MSOE Course Number	MSOE Course Name	Semester Credits
Communication & General Education		
COM 3001	Professional Presentations	3
PHL 3101	Ethics for Professional Managers & Engineers	3
Mathematics & Natural Science		
MTH 2480	Probability & Statistics	3
BSME Program		
IND 3510	Fund. Of Enterprise Operations	3
MEC 2110	Thermodynamics I	3
MEC 3120	Fluid Mechanics	3
MEC 3040 **OR**	Computer Aided Design **OR**	3
MEC 3140	Thermodynamics II	
MEC 3210	Material Science	3
MEC 3310	Instrumentation & Measurements	3
MEC 3130	Heat Transfer	3
MEC 3060	Machine Components	3
MEC 3220	Materials & Manufacturing Processes	4
MEC 3320	Dynamic Systems	3
MEC 4060 **OR**	Finite Element Analysis **OR**	3
MEC 4160	Comp. Fluid Dynamics	
MEC 4310	Automatic Control Systems	3
MEC 4810	Thermo Fluid Systems Lab	3
MEC 4901	Capstone Design I	3
MEC 4902	Capstone Design II	3
MEC Elective	MEC Technical Elective	3
MEC Elective	MEC Technical Elective	3
MEC Elective	MEC Technical Elective	3
Total		64

Addendum F: Software Engineering (BSSE)

Satisfaction of the following CLC courses is assumed upon entry into the Software Engineering program at MSOE. Any course requirement that is not met must be satisfied at MSOE or with approved transfer credit.

CLC Course Number	CLC Course Name	Equivalent MSOE Course Number
Communication & General Education		
ENG 121	English Composition 1	COM 1001
ENG 126	Scientific & Technical Communication	COM 2001
SOC 121 (suggested)	Introduction to Sociology - See appendix for more options	SOC 1001
ECO 222 (suggested)	Principles of Microeconomics See appendix for more options	BUS 2221
PHI 125 (suggested)	Intro to Ethics - See appendix for more options	HUM 0103
Mathematics & Natural Science		
MTH 145	Calculus & Analytic Geometry I	MTH 1110
MTH 146	Calculus & Analytic Geometry II	MTH 1120
MTH 246	Calculus & Analytic Geometry III	MTH 2130
MTH 227	Differential Equations	MTH 2140
CHM 121	General Chemistry I	CHM 1010
PHY 123	Physics for Science & Engineering I	PHY 1110
PHY 124	Physics for Science & Engineering II	PHY 1120
Software Engineering Courses		
CSC 128 **AND** CSC 148	Computer Science I **AND** Computer Science II	CSC 1110
CSC 248	Data Structures	CSC 2212
MTH 225	Linear Algebra	MTH 2340
MTH 244	Discrete Mathematics	MTH 2310

ADDITIONAL BSSE TRANSFER COURSES AVAILABLE THROUGH CLC

CLC Course Number	CLC Course Name	Equivalent MSOE Course Number
Communication & General Education		
CMM 121	Fundamentals of Speech	COM 3001

Addendum F: Software Engineering (BSSE)

Courses remaining in the Software Engineering program (BSSE) at MSOE, assuming successful completion of all courses listed on the preceding page.

MSOE Course Number	MSOE Course Name	Semester Credits
Communication & General Education		
COM 3001	Professional Presentations	3
Mathematics & Natural Science		
MTH 2480	Probability & Statistics	3
BSSE Program		
IDS 2020	Career Development	0
BUS 2411	Building Inclusive Teams	3
CYB 2001	Introduction to Cybersecurity Principles	3
CSC 1120	Data Structures & Graphic Interfaces	4
SWE 2410	Software Design	3
SWE 2512	Web Applications & Networking	4
SWE 2712	Software Tools & Process	3
CSC 3320	Databases	3
SWE 2721	Introduction to Software Verification	3
SWE 3411	Software Requirements & Arch.	4
SWE 3710	Software Development Lab I	3
SWE 3720	Software Development Lab II	3
SWE 4511	DevSecOps	4
CSC 3210	Operating Systems	3
CSC 3310	Algorithms & Advanced Data Structures	3
UXD 1001	Human-Centered Design	3
SWE 4901	Software Engineering Capstone I	3
SWE 4902	Software Engineering Capstone II	3
Elective	Program-Lower	3
Elective	Program-Upper	3
Total		**67**

APPENDIX: GENERAL EDUCATION HUMANITIES & SOCIAL SCIENCE EQUIVALENCIES

MSOE requires courses that fulfill Common Learning Outcome (CLO) categories.
The following four CLO categories can be satisfied with CLC courses:

- Exhibit Curiosity CLO
- Embrace Diversity CLO
- Demonstrate Ethical Understanding
- Choice CLO – Choose one course from the table below

Note: Each course counts towards only one CLO and the same course cannot fulfill multiple CLO categories.

CLO	CLC Courses	Equivalent MSOE Courses
Exhibit Curiosity	ANT 121 Intro to Anthropology	ANT 1001 Cultural Anthropology
	ANT 221 Cultural Anthropology	ANT 1001 Cultural Anthropology
	ART 121 Intro to Art	AHT 2001 Western Art History
	ART 240 History of Art I	HUM 0106 AHT EL
	ART 241 History of Art II	HUM 0106 AHT EL
	ECO 221 Principles of Macro	BUS 2222 Macroeconomics
	ECO 222 Principles of Micro	BUS 2221 Microeconomics
	ENG 128 Linguistics & Society	PSY 2010 Understanding Hum. Lang.
	ENG 243 Introduction to Fiction	LIT 2010 Literary Genres
	HST 121 Western Civ to 1500	HUM 0106 HIST EL
	HST 122 Western Civ 1500 to Present	HUM 0106 HIST EL
	HST 126 Non-Western World	HUM 0106 HIST EL
	HST 142 World History from 1500	HUM 0106 HIST EL
	HST 221 US History to 1876	HST 1013 US History I
	HST 222 US History 1876-Present	HST 1014 US History II
	HUM 123 Intro to Film	FNA 4010 Film & Media Studies
	HUM 222 Film & Society	FNA 4010 Film & Media Studies
	PSY 121 Intro to Psychology	PSY 1001 Foundations of Psychology
	PSY 122 Industrial/Org Psychology	PSY 2003 Organizational Psychology
	PSY 220 Lifespan Psychology	PSY 3003 Developmental Psychology
	PSY 222 Child Growth & Develop.	SSC 0106 PSY EL
	PSY 223 Abnormal Psychology	PSY 3002 Psych. Disorders
	SOC 121 Introduction to Sociology	SOC 1001 Foundations of Sociology
	SPA 121 Beginning Conver. Span I	SPN 1001 Elementary Spanish
	SPA 122 Beginning Conver. Span II	SPN 1001 Elementary Spanish
Embrace Diversity	ANT 121 Introduction to Anthro.	ANT 1001 Cultural Anthropology
	ANT 221 Cultural Anthropology	ANT 1001 Cultural Anthropology
	PHI 123 Philosophy of Religion	PHL 3209 Philosophy of Religion
	PSY 223 Abnormal Psychology	PSY 3002 Psych. Disorders
	SOC 121 Introduction to Sociology	SOC 1001 Foundations of Sociology
	SPA 121 Beginning Conver. Span I	SPN 1001 Elementary Spanish
	SPA 122 Beginning Conver. Span II	SPN 1001 Elementary Spanish
	SPA 224 Spanish Civilization II	SPN 4980 Topics in Spanish
Ethical Understanding	PHI 125 Intro to Ethics	HUM 0103 Demonstrate Ethical