Addendum E: Mechanical Engineering (BSME)

Satisfaction of the following MATC 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.

MATC Course Number	MATC Course Name	Equivalent MSOE Course Number
Communication & General Education		
ENG-201	English 1	COM 1001
ENG-208	Technical Communications	COM 2001
SPEECH-201	Elements of Speech	COM 3001
ART-201 (suggested)	Understanding Art - See appendix for more options	HUM 0104 Diversity CLO
SOCSCI-149 (suggested)	Ethics for the Professions See appendix for more options	PHL 3101 Ethics CLO
ECON-195 (suggested)	Economics See appendix for more options	BUS 2222 Curiosity CLO
General Education Elective Choice CLO	Many Options See appendix for options	Many Options Choice CLO
Mathematics & Natural Science		
MATH-231	Analytic Geometry & Calculus 1	MTH 1110
PHYS-274	Calculus-Based Physics 1	PHY 1110
PHYS-275	Calculus-Based Physics 2	PHY 1120
CHEM-211	Chemistry 1	CHM 1010
Mechanical Engineering Courses		
MCDESG-125 **AND** MCDESG-135	Design Problems PTC Creo	MEC 1602
MATH-232	Analytic Geometry & Calculus 2	MTH 1120
MATH-233	Analytic Geometry & Calculus 3	MTH 2130
MATRLS-102 AND MATRLS-151	Material Testing Metallurgy & Material Science	MEC 3210

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
Mathematics & Natural Science		
MTH 2140	Differential Equations	3
MTH 2480	Probability & Statistics	3
BSME Program		
MEC 1900	Introduction to ME	1
MEC 1910	Computer Applications in Engineering	3
MEC 2010	Engineering Mechanics I: Statics	3
MEC 2020	Engineering Mechanics II: Dynamics	3
MEC 2030	Mechanics of Materials	4
MEC 2110	Thermodynamics	3
MEC 3040 **OR** MEC 3140	Computer-Aided Design **OR** Thermodynamics II	3
MEC 3120	Fluid Mechanics	3
MEC 3310	Instrumentation & Measurements	3
MEC 3060	Design of Machine Components	3
MEC 3130	Heat Transfer	3
MEC 3220	Materials & Manufacturing Processes	4
MEC 3320	Dynamic Systems	3
MEC 4060 **OR** MEC 4160	Finite Element Analysis **OR** Computational Fluid Dynamics	3
MEC 4310	Automatic Control Systems	3
MEC 4810	Thermo-Fluid Systems Lab	3
MEC 4901	ME Capstone Design I	3
MEC 4902	ME Capstone Design II	3
IND 3510	Fundamentals of Enterprise Operations	3
ELE 2051	Circuit Theory for Mechanical Engineers	3
Elective	ME Technical	3
Elective	ME Technical	3
Elective	ME Technical	3
Total		**75**

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 MATC courses:

- Exhibit Curiosity CLO
- Embrace Diversity CLO
- Demonstrate Ethical Understanding CLO
- Choice of CLO - Select any course listed from the table below

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

General Education Humanities & Social Science

CLO	MATC Courses	Equivalent MSOE Courses
Exhibit Curiosity	SOCSCI-206 Intro to Cul. Anthropology	ANT 1001 Cultural Anthropology
	HIST-218 Native American History	ANT 2020 Native American Culture
	SPEECH-212 Introduction to Theater	FNA 2002 Drama and the Theater
	ENG-207 Creative Writing	FNA 3001 Creative Writing
	ENG-240 Introduction to Mod. Cinema	FNA 4010 Film & Media Studies
	ECON-195 Economics	BUS 2222 Macroeconomics
	ECON-202 Principles of Macro.	BUS 2222 Macroeconomics
	HIST-211 America through 1877	HST 1013 U.S. History I
	HIST-212 American Since 1977	HST 1014 U.S. History II
	MUSIC-205 Music Appreciation	HST 2053 Music History
	HIST-203 Western Civ. From Ancient	HUM 0106 Exhibit Curiosity
	HIST-204 Western Civ. From 1776	HUM 0106 Exhibit Curiosity
	HIST-228 World History to 1500	HUM 0106 Exhibit Curiosity
	SOCSCI-197 Cont. Amer. Society	HUM 0106 Exhibit Curiosity
	SOCSCI-250 Intro. To Philosophy	PHL 3201 Intro. To Philosophy
	SOCSCI-221 Amer. National Gov.	PSC 2011 Amer. Government
	PSYCH-198 Intro to Psychology	PSY 1001 Foundations of Psychology
	PSYCH-231 Introductory Psyc.	PSY 1001 Foundations of Psychology
	SOCSCI-204 Marriage and the Fam.	PSY 2005 The Family
	SOCSCI-210 Death & Dying	PSY 2006 Death, Dying, & Grief
	PSYCH-232 Abnormal Psychology	PSY 3002 Psychological Disorders
	PSYCH-159 Abnormal Psychology	PSY 3002 Psychological Disorders
	PSYCH-188 Developmental Psychology	PSY 3003 Developmental Psychology
	PSYCH-238 Lifespan Psychology	PSY 3003 Developmental Psychology
	SOCSCI-246 Human Sexuality	SSC 0106 Exhibit Curiosity
	PSYCH-199 Psychology of Human Rel.	PSY 3004 Social Psychology
	SOCSCI-203 Intro to Sociology	SOC 1001 Foundations of Sociology
	SOCSCI-205 Social Problems	SSC 0106 Exhibit Curiosity
	FLANG-202 Spanish 1	SPN 1001 Elementary Spanish
	FLANG-205 Spanish 2	SPN 2001 Intermediate Spanish
Embrace Diversity	ART-201 Understanding Art	HUM 0104 Embrace Diversity
	SOCSCI-206 Introduction to Cul. Anth.	ANT 1001 Cultural Anthropology

	HIST-218 Native American History	ANT 2020 Native American Culture
	HIST-219 Wis. Indians Past/Present/Fut.	HUM 0104 Embrace Diversity
	HIST-231 Latin American History	HUM 0104 Embrace Diversity
	HIST-215 African American History	HUM 0104 Embrace Diversity
	SOCSCI-204 Marriage & Family	PSY 2005 The Family
	PSYCH-232 Abnormal Psychology	PSY 3002 Psychological Disorders
	PSYCH-159 Abnormal Psychology	PSY 3002 Psychological Disorders
	SOCSCI-203 Intro to Sociology	SOC 1001 Foundations of Sociology
	SOCSCI-172 Intro to Diversity	SSC 0104 Embrace Diversity
	FLANG-202 Spanish 1	SPN 1001 Elementary Spanish
	FLANG-205 Spanish 2	SPN 2001 Intermediate Spanish
	FLANG-213 Spanish 3	SPN 3001 Advanced Spanish
Demonstrate Ethical Understanding	SOCSCI-149 Ethics for the Professions	PHL 3101 Ethics for Prof. Managers
	SOCSCI-166 Intro to Ethics	HUM 0103 Ethical Understanding
	SOCSCI-200 Intro to Ethical Issues	HUM 0103 Ethical Understanding