



TRANSFER GUIDE - ASSOCIATE DEGREE PROGRAMS

NTC Program: MECHANICAL DESIGN

MSOE Program: Bachelor of Science - Engineering (BSE) V 2.0

Minimum GPA for admission: 3.0

Initial effective date: July 29, 2016

General Education Courses

NTC			MSOE		
Course No.	Course Title	Credits	Course No.	Course Title	Credits
10-804-195	College Algebra with Apps (3 cr.) <u>OR</u>	3		n/a	0
10-804-118	Intermediate Algebra with Apps (4 cr.)			n/a	0
10-804-196	Trigonometry with Apps	3		n/a	0
10-806-154	General Physics 1	4	PH 113	College Physics I	4
10-801-195	Written Communication <u>OR</u>	3			
10-801-136	English Composition 1		GS 1001	Freshman Studies I (Composition)	4
10-801-197	Technical Reporting	3	GS 1002	Freshman Studies II (Technical Composition)	4
10-809-196	Intro to Sociology <u>AND</u>	3	SS 471	Sociology Elective	3
10-809-198	Intro to Psychology <u>OR</u>	3	SS 460	Foundations of Psychology	3
10-809-199	Psychology of Human Relations		SS 4xx	SS Elective	3
Total general education credits earned:		22			
Total transferable general education credits:				Total general education credits accepted:	21

Occupational Courses

Course No.	NTC Course Title	Credits	Course No.	MSOE Course Title	Credits
10-606-105	Technical Drafting/CAD	2	FR EL	EG- 124 CAD Graphics I (Free elective^)	3
10-606-128	Technical Detailing	2	FR EL	MT 267 Dimensioning and Tolerancing (Free Elective^)	3
10-606-132	Materials of Industry (plus 606-162)	2	FR EL	MT 1201 Basic Materials & Processes (Free Elective^)	3
10-606-160	Manufacturing Processes - Machining	2	FR EL	MT 228 Machining Processes (Free Elective^)	3
10-606-103	Mechanical Design Workforce Preparedness	1		n/a	
10-606-106	2D AutoCad Applications	2	FR EL	Free elective^	3
10-606-111	Applied Mechanics for Technicians	3	ME 2001	Mechanics I (Statics)	4
10-606-115	Machine Design 1 (plus 606-117)	2	FR EL	MT 2601 Mechanical Components (Free Elective^)	3
10-606-162	Manufacturing Processes - Fabrications (plus 606-132)	2		see 606-132 for credit	0
10-606-163	Strength of Materials	3	ME 2004	Mechanics of Materials I	4
10-103-225	Excel 2013 Level 1	1		n/a	
10-606-100	Solidworks for Mechanical Design	2	ME 1601	Introduction to Engineering Design	3
10-606-107	Designing for Manufacturability	4	FR EL	Free (3 credit) elective^	

10-606-114	Mechanisms	4	FR EL	MT 2611 Free (3 credit) elective^	
10-606-117	Machine Design 2 (plus 606-115)	3		see 606-115 for credit	0
10-612-120	Fluid Power Systems 1: Fundamentals (plus -121 & -122)	1	FP 2701	Basic Fluid Power (Tech Elective 1)	3
10-612-121	Fluid Power Systems 2: Fund Pneumatics(plus-120 &-122)	1			
10-612-122	Fluid Power Systems 3: Design & Maint (plus-120 &-121)	1			
10-606-108	Geometric Dimensioning & Tolerancing Fund.	1		n/a	0
10-606-109	Computer Apps & Analysis for Engineers	1		n/a	0
10-606-116	Tooling & Production	2	FR EL	Free (3 credit) elective^	
10-606-125	Design Problems	3	FR EL	Free (3 credit) elective^	
10-606-130	Autodesk Inventor 3D CAD Software	2	FR EL	Free (3 credit) elective^	
	Total occupational course credits earned:	47		Total occupational course credits accepted:	32
	Total credits required for graduation:	69			
	Total transferable credits:			Total credits accepted at MSOE:	53

* Note: ^ A maximum of 18 credits of Free Electives (six - 3 credit free electives) may be transferred.

Other NTC to MSOE Course Equivalents
10-801-196 Oral Communication = GS 1003
10-809-166 Intrtol to Ethics = HU 43x Philosophy elective
10-809-188 Developmental Psychology = SS 462
10-894-198 Calculus 1 = MA 136

Courses needed to complete degree at MSOE:		
Course No.	Course Title	Credits
BI 102	Cell Biology and Genetics	4
CH 200B	Chemistry I	4
CH 201	Chemistry 2	4
EE 201	Linear Networks	4
EE 1910	Introduction to Embedded Systems Programming	4
GE 3102	Fluid Mechanics	4
GE 3302	Instrumentation and Contol of Engineered Systems	4
GE 3650	Engineering Systems Deisng	4
GE 3651	Computer-Aided Engineering Design	3
GE 4901	Capstone Design I	3
GE 4902	Capstone Design II	3
GE 4903	Capstone Design III	3
GS 1003	Freshman Studies III (Speech)	4
HU	Humanities	3
HU	Humanities	3
HU 432	Ethics fro Professional managers and Engineers	3
IE 340	Project Management	3
IE 423	Engineering Economy	3
MA 136	Calculus for Engineers I	4
MA 137	Calculus for Engineers II	4

MA 231	Calculus for Engineers III	4
MA 232	Calculus for Engineers IV	3
MA 235	Differential Equations for Engineers	4
MA 262	Probability and Statistics	3
MA 330	Vector Analysis	3
MA 383	Linear Algebra	3
ME 190	Computer Applications in Engineering 1	3
ME 2002	Mechanics II	4
ME 2003	Mechanics III (Dynamics)	4
ME 321	Material Science	3
ME 354	Thermodynamics and Heat Transfer	3
MS 221 OR 3	Econ Elective-Microeconomics OR Macroeconomics	3
MS 331	Business Law	3
MS 354	Principles of Accounting	3
PH 123	College Physics II	4
Tech	Technical Elective 2	3
Tech	Technical Elective 3	3
Tech	Technical Elective 4	3
Tech	Technical Elective 5	3
Tech	Technical Elective 6	3
Tech	Technical Elective 7	3
Total credits needed at MSOE to complete degree (139 quarter credits is equivalent to 93 semester credits.)		139
Total Credits in BSE Program at MSOE		192

Disclaimer: Students planning to transfer should contact NTC's Transfer Specialist and transfer personnel at (college) for the most current transfer information.

Updated on: 7/29/16

MSOE is working on updating the guide. For the most current information, please contact Judy Prest at prest@msoe.edu or at (414) 277-224.