## **Michigan Technological University**

## Minor in Manufacturing

Program Code: EMMF, Academic Year 2019-20

Department of Mechanical Engineering-Engineering Mechanics

**Total Credits Required: 18** 

# **Required Courses: 6 credits**

Course	Credits
EC 3400 Economic Decision Analysis (3)	
MEEM 3600 Introduction to Manufacturing (3)	

## **Elective Courses: 12 credits**

Process Courses: select at least 3 credits

Course	Credits
EE/MSE 4240 Introduction to MEMS (4)	
EE/MSE 4777 Open-Source 3-D Printing (3)	
ENT 3966 Design for Manufacturing (1)	
MEEM 4610 Adv Machining Processes (3)	
MEEM 4625 Precision Manuf. & Metrology (3)	
MEEM 4635 Design with Plastics (3)	
MEEM 4640 Micromanufacturing Processes (3)	
MEEM 4695 Additive Manufacturing (3)	
MEEM 5401 Design for Reliability (3)	
MEEM 5670 Experimental Design in Engineering (3)	
MSE 4120 Material & Processing Selection in Design (3)	
MSE 4310 Principles of Metal Casting (3)	

## Systems Courses: select at least 3 credits

Course	Credits
ENT 3959 Fundamentals of Six Sigma 1 (1)	
ENT 3967 Six Sigma II (1)	
MEEM 4430 Advanced CAD and CAM Methods (4)	
MEEM 4630 Human Factors (3)	
MEEM 4650 Quality Engineering (3)	
MEEM 4655 Production Planning (3)	
MEEM 4675 Design Material Handling Systems (3)	
MEEM 4705 Intro Robotics & Mechatronics (4)	
MEEM 4707 Autonomous Systems (3)	
MEEM 5655 Lean Manufacturing (3)	
MEEM 5680 Optimization I (3)	

Prerequisite courses can be found in the undergraduate catalog.