

## Michigan Technological University

### Minor in Manufacturing

Program Code EMMF, Academic Year 2025-2026

College of Engineering

Minimum Credits Required: 18

#### Required Courses: 4-6 Credits

- EC 3400 Economic Decision Analysis (3) *Prereqs: UN1015*  
and MEEM 3600 Introduction to Manufacturing (3) *Prereqs: MEEM2150 and MSE2100*
- or ME 3601 Introduction to Manufacturing (4) *Prereqs: ME/MEEM 2901*

#### Elective Courses: 12-14 credits

##### Process Courses: Select at least 3 credits

- EE/MSE 4240 Introduction to MEMS (4) *Prereqs: none*
- EE/MSE 4777 Open-Source 3-D Printing (3) *Prereqs: none*
- ENT 3966 Design for Manufacturing (1) *Prereqs: ENG1102*
- ME/MEEM 4610 Advanced Machining Processes (3) *Prereqs: MEEM3600*
- ME/MEEM 4640 Micromanufacturing Processes (3) *Prereqs: MEEM3400 and MEEM3600*
- ME/MEEM 4695 Additive Manufacturing (3) *Prereqs: Prereqs: MEEM3600*
- ME/MEEM 5401 Design for Reliability (3) *Prereqs: MEEM4901 or ENT4950*
- ME/MEEM 5670 Experimental Design in Engineering (3) *Prereqs: MEEM4901 or ENT4950*
- MSE 4310 Principles of Metal Casting (3) *Prereqs: MY2100 or MSE2100 or BE2800*

##### System Courses: Select at least 3 credits

- ENT 3959 Fundamentals of Six Sigma 1 (1) *Prereqs: none*
- ENT 3967 Six Sigma II (1) *Prereqs: none*
- ME/MEEM 4430 Advanced CAD and CAM Methods (4) *Prereqs: ENG1102 and MEEM3600*
- ME/MEEM 4650 Quality Engineering (3) *Prereqs: MEEM3600 and (MA3710 or MA3720 or MA2710 or MA2720)*
- ME/MEEM 4655 Production Planning (3) *Prereqs: MEEM3600*
- ME/MEEM 4705 Intro Robotics & Mechatronics (4) *Prereqs: MEEM3750*
- ME/MEEM 4707 Autonomous Systems (3) *Prereqs: MEEM3750 or MEEM4775*
- ME/MEEM 4665 Intro to Lean Manufacturing (3) *Prereqs: MEEM3600*
- ME/MEEM 5680 Optimization I (3) *Prereqs: MEEM4901 or ENT4950*