

## Michigan Technological University

### Minor in Structural Materials

Program Code MSSM, Academic Year 2022-23

College of Engineering

Total Credits Required: 18

#### Required Courses: 9 Credits

- MSE 2110 Intro to Materials Science & Engineering (3) *Prereqs: (MY2100 or MSE2100 or BE2800) and (ENG1100 or ENG1101)*
- MSE 4100 Mechanical Behavior of Materials (3) *Prereqs: (MY2110 or MSE2110) and (MEEM2150 or ENG2150)*
- MSE 4120 Materials and Process Selection (3) *Prereqs: MY2100 or MSE2100 or BE2800*

#### Elective Courses: 9 credits

- CEE 3101 Civil Engineering Materials (3) *Prereqs: ENG2120 or MEEM2150 or CMG2120*
- MSE 3120 Materials Characterization I (4) *Prereqs: MY2110 or MSE2110*
- MSE 3130 Materials Characterization II (4) *Prereqs: MY2100 or MSE2100 or BE2800*
- MSE 4110 Intro to Polymer Engineering (3) *Prereqs: (MY2100 or MSE2100 or BE2800) and CH1160*
  - or CM/CH 4610 Intro to Polymer Science (3) *Prereqs: CH1122 or (CH1160 and CH1161)*
- MSE 4310 Principles of Metal Casting (3) *Prereqs: MY2100 or MSE2100 or BE2800*
- MSE 4320 Corrosion & Environmental Effects (3) *Prereqs: MY2100 or MSE2100 or BE2800*
- MSE 4330 Advanced Physical Metallurgy (3) *Prereqs: MY3300 or MSE3140*
- MSE 4410 Science of Ceramic Materials (3) *Prereqs: MY2100 or MSE2100 or BE2800*
- MSE 4430 Composite Materials (3) *Prereqs: MY2100 or MSE2100 or BE2800*
- MSE 4510 Contact Mechanics & Nanoindentation (3) *Prereqs: (MY2100 or MSE2100 or BE2800) and (MA3521 or MA3520 or MA3530) and MEEM2150*
- MSE 4990 Undergraduate Research (1-3) *Prereqs: none*