Michigan Technological University  
Minor in Mineral Processing  
Program Code CMMP, Academic Year 2023-24  
Department of Chemical Engineering  
Total Credits Required: 18

**Required Mineral Processing and Mineralogy Courses: 7 credits**
- CM 2200 Intro to Minerals & Materials (3)  
  Prereqs: none
- CM 3830 Mineral Processing and Extraction Lab (1)  
  Prereqs: CM2110(C) or CM2200(C)
- GE 2300 Mineral Science (3)  
  Prereqs: CH1000 or CH1112 or (CH1150 and CH1151)

**Thermodynamics Courses: 1 course for 4 credits**
- CM 3230 Thermodynamics for Chem Engineering (4)  
  Prereqs: CM2110 and MA2160 and PH2100
- CEE 3200 Thermo/Fluid Mechanics (4)  
  Prereqs: CH1150 and CH1151 and PH2100 and ENG1102 and MA2160
- MEEM 3201 Intro Fluid Mechanics & Heat Transfer (4)  
  Prereqs: MEEM2201 and MEEM2911 and MA3160
- MSE 3100 Materials Processing I (4)  
  Prereqs: (MY2100 or MSE2100 or BE2800) and MA2160

**Elective Courses: select remaining 7 credits**
- CM 3825 Sampling, Statistics, and Instrumentation (2)  
  Prereqs: none
- CM 4020 Undergrad Research in Mineral Processing Engineering (1-3)  
  Prereqs: none
- CM 4505 Particle Technology (3)  
  Prereqs: none
- CM 4510 Interfacial Engineering (3)  
  Prereqs: CH3510
- CM/MSE 4740 Hydrometallurgy/Pyrometallurgy (4)  
  Prereqs: CH1122 or (CH1160 and CH1161)
- EC 4630 Mineral Industry Economics (3)  
  Prereqs: EC2001 and UN1015 and (UN1025 or 3000-level Mod. Language)
- ENT XXXX Enterprise Project Work (1-3)  
  Topic must be approved by minor academic advisor
- GE 3440 Drilling and Blasting (4)  
  Prereqs: GE2020 and PH2100 and MA2160
- GE 4360 Bulk Materials Dynamics & Engineering (4)  
  Prereqs: PH2100 and GE2320 and ENG2120
- MSE 3120 Materials Characterization I (4)  
  Prereqs: MSE2110 or MY2110