### **Frequently Asked Questions**

#### Q: How do I sign up for a minor?

Answer: See the minor advisor first. The Department of Chemical Engineering requires that you turn in a minor audit form to the advisor before the minor may be added. Then you may submit a request to add the minor using the online curriculum change portlet on MyMichiganTech.

https://mymichigantech.mtu.edu/

#### Q: How do I drop a minor?

Answer: Submit a request to drop the minor using the online curriculum change portlet on MyMichiganTech. No approval is needed to drop a minor. https://mymichigantech.mtu.edu/

# Q: Do credits from a minor double count towards my major?

Answer: Yes, they may double count for both your major and minor.

# Q: Can I minor in more than one thing?

Answer: Yes, however each course can only be used towards one minor and only two minors can be printed on your diploma.

#### Q: When are the courses offered?

Answer: The course schedule is on the web: <a href="http://www.mtu.edu/registrar/">http://www.mtu.edu/registrar/</a> Note that some courses are only offered every other year, so it is best to plan ahead.



### Faculty Involved with the Mineral Processing Minor:

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### Minor in Mineral Processing at Michigan Tech



This minor prepares students for careers in the field of mineral processing, which includes the production of metals, industrial minerals. solid fuels, and similar products. Mineral processing engineers work in a variety of industries that are concerned with raw materials, including mining and metals extraction, inorganic chemical manufacture, construction materials production, and waste recycling/reuse. The worldwide need for everincreasing amounts of raw materials extracted from progressively more difficult sources creates a strong demand for engineers with knowledge of this area. Courses in the minor provide expertise in particulate handling and processing, extraction and purification of inorganic compounds, and high-temperature processing.

Required credits: 18cr

Required classes: See other side



Academic Year 2018-19 Minor in Mineral Procesing (CMMP) Department of Chemical Engineering Credits Required: 18

Student Name and ID Number

Required Mineral Processing and Mineralogy Courses (7 credits)	Credits
CM 2200 Intro to Minerals & Materials Processing (3)	
CM 3830 Mineral Processing and Extraction Lab (1) Preregs: CM2110(C) or CM2200(C)	
GE 2300 Mineral Science (3) Prereqs: CH1000 or CH1112 or (CH1150 and CH1151)	

Thermodynamics Courses (Select 1 course, 4 credits)	Credits
CM 3230 Thermodynamics for Chem Eng (4)	
Preregs: CH3510 and MA3160 and(MA3520(C)or MA3521(C) or MA3530(C) or MA3560(C))	
ENG 3200 Thermo/Fluid Mechanics (4)	
Prereqs: MA2160 and CH1112 or (CH1150 and CH1151) and PH2100 and ENG1102	
MEEM 3201 Intro Fluid Mechanics & Heat Transfer (4)	
Prereqs: MEEM2201 and MEEM2911(C) and (MA3520 or MA3521 or MA3530 or MA3560)	
MSE 3100 Materials Processing I (4) Preregs: MSE2100 and MA2160	

Elective Courses (Select remaining 7 credits)	Credits
CM 3825 Sampling, Statistics, and Instrumentation (2) Preregs: none	
CM 4020 Undergrad Research in Mineral Processing Engineering (1-3) Preregs: none	
CM 4505 Particle Technology (3) Preregs: none	
CM/MSE 4740 Hydrometallurgy/Pyrometallurgy (4) Prereqs: CH1122 or (CH1160 and CH1161)	
GE 3400 Drilling and Blasting (3) Prereqs: GE2020 and PH2100	
GE 4360 Material Handling (3) Preregs: PH2100	
GE/EC 4630 Mineral Industry Economics (3) Prereqs: EC2001 and UN1015 and (UN1025 or 3000-level Mod. Language)	
MSE 3120 Materials Characterization I (4) Preregs: MSE2100 and MSE2110	
Total Credits Required = 18	