

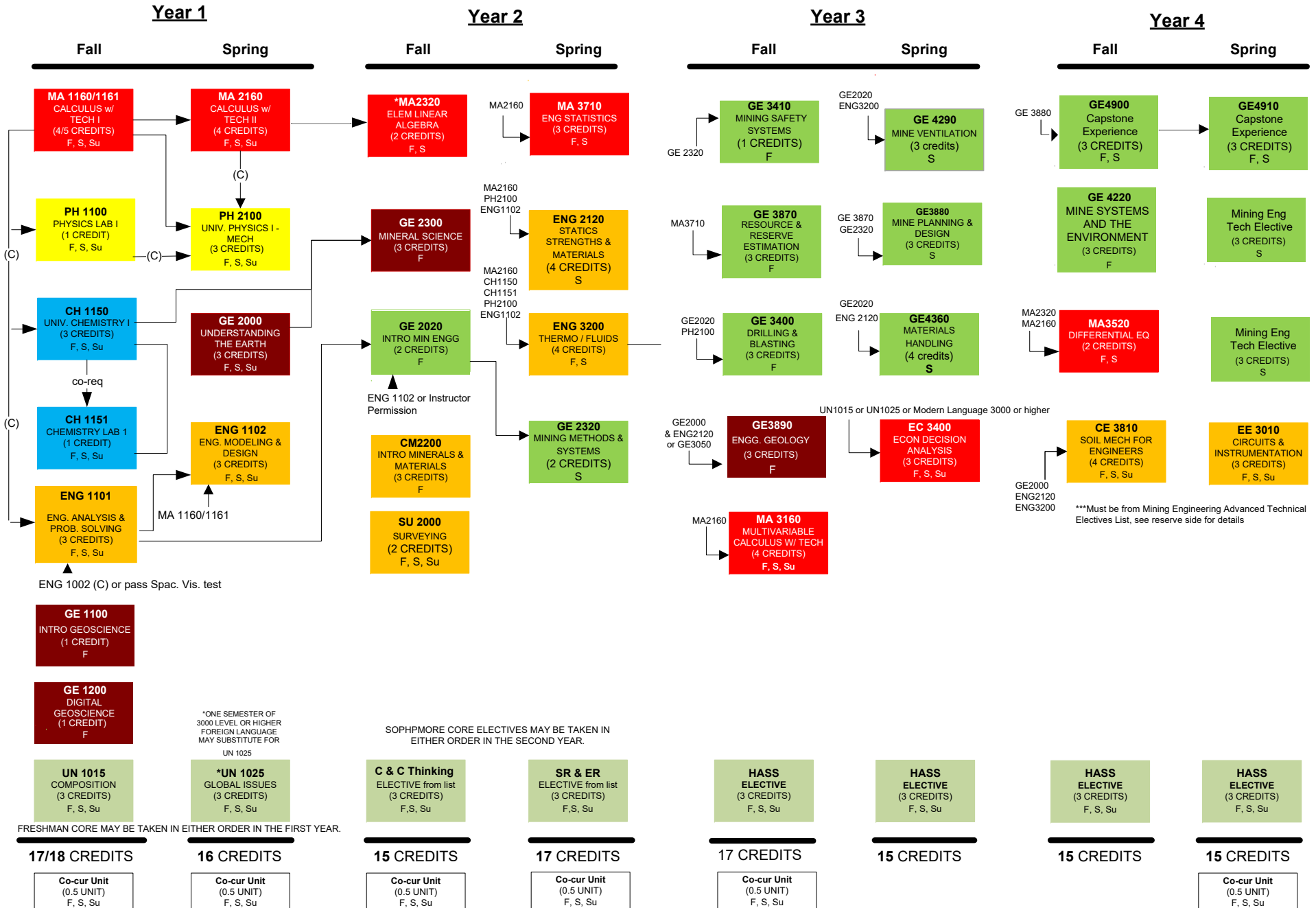


# Bachelor of Science in Mining Engineering

2022 - 2023

Revised 03/04/2022

- PREREQUISITE (COURSE MUST BE COMPLETED PRIOR TO ENROLLMENT)
- (C)→ CONCURRENT PREREQUISITE, PREREQ. THAT MAY BE TAKEN SIMULTANEOUSLY WITH THE COURSE
- F INDICATES COURSE IS OFFERED FALL SEMESTER
- S INDICATES COURSE IS OFFERED SPRING SEMESTER
- Su INDICATES COURSES IS OFFERED SUMMER SEMESTER



## BS in Mining Engineering 2022-2023

(Minimum of 127 Credits)

### Mining Engineering Advanced Technical Electives

Six credits of Mining Engineering Electives are required, see list in the table below. Prerequisites not normally required must be satisfied by free electives or other courses not specifically listed. With approval of Mining Engineering ABET Coordinator, Mining Engineering electives may be substituted with Independent Mining Engineering Research and/or Cooperative Lab.

### Enterprise Concentration (12 Credits)

With permission of Mining Engineering ABET Coordinator, enterprise may substitute 6 credits of interdisciplinary project for GE 4900 and GE 4910; 3 credits of required communication, teaming or business must be double counted as Distribution (HASS) credits; and 3 credits of enterprise instructional modules must be substituted for free electives.

**Enterprise Minor:** Follow concentration, and take 6 additional credits beyond required degree as per minor requirements.

**Second Degree Policy:** Candidates for a second degree must meet all the coursework requirements for the major in the second degree with a minimum of 25% of the credit hours required for the degree,

### Mining Engineering Advanced Technical Electives

Course Title	Offered	Prerequisite(s)
GE 4504 Air Quality Engineering and Science	FA	ENVE 3501 or ENVE 3503
GE 4610 Formation Evaluation. & Petroleum Engineering	FA	
GE 3850 Geohydrology	FA, SP	
GE 3200 Geochemistry	SP	CH 1150 and CH 115
GE 4800 Groundwater Engineering	SP	GE 3850
GE 4860 Computer Methods in Geomechanics	SP	GE 2000, ENG 2120, (ENG 3200 or ENG 3507)
GE 4680 Operations Research for Mining Engineers	On Demand	GE 2020 or GE 2320
CM 3830 Mineral Processing and Extraction Lab	SP	
CM 4020 Undergraduate Research in Mineral Processing Engineering	FA, SP	
CM 4505 Particle Technology	SP	
CE 3620 Water Resources Engineering	FA, SP	
CE 4511 Solid and Hazardous Waste Engineering	SP	ENVE 3501 or CEE 3501 or ENVE 3503 or CEE 3503
CE 4820 Foundation Engineering	FA	
CE 4830 Geosynthetics Engineering	SP	CE 3201, CE 3810
CE 4850 Rock Engineering for Civil Engineering	SP alt year	CE 3810

**NOTE:** Advisors may also use special Topics Courses focusing predominantly on applications of engineering to geological engineering systems/projects with prior approval. Additionally, with prior approval from advisor, student may choose other technical electives. Many appropriate senior-level engineering courses are offered in Civil & Environmental Engineering on topics related to those listed above.

## General Education Requirements

### I. Core Courses (6 Credits)

\_\_\_ UN 1015                      \_\_\_ UN 1025\*

\* Or one semester of a 3000 level or higher modern language.

### II. Sophomore Core Courses (6 Credits)

Creative and Critical Thinking \_\_\_\_\_

Social Responsibility and Ethical Reasoning \_\_\_\_\_

### III. HASS Course Requirements (12 Credits)

(<http://www.mtu.edu/registrar/pdfs/core-and-hass-list-17-18-v2.pdf>)

- 6 credits 3000- or 4000- level

- 3 credits required from each of these 3 lists:

*Communication and Composition, Humanities and Fine Arts (HU/FA), and Social and Behavioral Sciences (EC/PSY/SS)*

- No more than 3 credits on the Restricted HASS List

A. 6 credits 3000- or 4000- level:

1. \_\_\_\_\_ 2. \_\_\_\_\_

B. 6 credits at any level:

1. \_\_\_\_\_ 2. \_\_\_\_\_

### IV. Co-curricular activities (3 units)

The co-curricular requirement consists of three semester units of physical education activities. These units are required for graduation, but are not included in the overall degree-credit requirement.

Note: Most physical education activities will last for 7 ½ weeks or ½ semester. A student would need **six** of these ½-semester units to fulfill the 3-semester unit co-curricular requirement.

PE \_\_\_\_\_ PE \_\_\_\_\_ PE \_\_\_\_\_

PE

PE

PE

### BS Mining Engineering Curriculum Overview (127 Total Credits)

■ General Education Requirements (Core and HASS)

■ Geoscience Major Requirements

■ Chemistry Major Requirements

■ Mathematics Major Requirements

■ Physics Major Requirements

■ General Engineering Major Requirements

■ Mining Engineering Major Requirements

■ Engineering Technical Electives and Capstone Experience

