

# ECE 205: Introduction to MINING ENGINEERING



An exciting introduction to a rewarding career in mining!

ONLINE  
CLASSES



THE UNIVERSITY OF ARIZONA  
COLLEGE OF ENGINEERING

Mining & Geological  
Engineering

## Course Description:

This first course for mining engineering majors provides an overview of the mine life cycle from exploration to reclamation and post mining use; mining equipment; unit operations, such as blasting and ventilation; waste management and recycling; health and safety; and principles of sustainability. The class includes case studies and data analytics, and will be held on the Chandler-Gilbert Community College campus. Students will attend the course remotely from a classroom in CGCC or from their laptop.

## Topics Covered:

- Design of underground and surface mines
- Application of automation and AI in mining
- How to quantify an ore deposit
- Assessment of various underground and surface mining methods
- Calculation cost and assessing feasibility of mines
- Explosives use and blast design
- Application of sustainability principles to mine design and operation
- Principles of mineral processing
- Selection of mining equipment for various methods and commodities
- Management of mine waste and tailings

## This Course Features:

- Mine field trip
- Trip to the University of Arizona's underground experimental mine
- Use of industry data sets
- Guest speakers
- Global case studies

CLASSES HELD AT



**CHANDLER-GILBERT  
COMMUNITY COLLEGE**

A MARICOPA COMMUNITY COLLEGE



Ready to start your journey in mining engineering?  
Enroll now in ECE 205!

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Questions? Contact **Fanny Silvestri** at [fanny.silvestri@cgc.edu](mailto:fanny.silvestri@cgc.edu).

[tinyurl.com/4wv55pme](https://tinyurl.com/4wv55pme)