

Ge 192. Special Topics in Geological Sciences-Economic Geology

Instructor: John Eiler

4 units (3-0-1) | Third term

Class meeting: 10:30 - 11:55, Tuesdays and Thursdays

Class location: 215 NM

Grade: Pass/Fail

Modern civilization depends on minerals and metals that are extracted from the earth via mining. This course bridges fundamental mineralogy and petrology with industrial applications in resource discovery, extraction, and processing. Students will receive a basic overview (or review) of topics in economic geology including ore deposit formation and distribution, geologic exploration methods, and the technoeconomic analysis and modeling that determines the financial viability of deposits. Additional topics will include mining logistics, resource transport and processing at industrial scales, current industry best practices, and emerging frontiers such as asteroid mining.

Grades will be based on participation and a white paper proposing a sponsored research project that aligns students' scientific interests with an industrial partner's needs.