



Outreach

Our department offers a number of service activities for our stakeholders. We keep permanent contact with our community, industry and alumni. We enforce the concept of *communities of practice* as a way to enhance people development. Our department is actively involved with the mining community through the organization of seminars, conferences, specific training courses, diploma programs, and social activities such as the anual mining dinner UC.



International relationships & student exchange programs

We prepare professionals for a global world, and we strongly believe in the value of collaboration and diversity, therefore our department has built an extense network of internaltional parterne-rships. A number of cooperation agreements with international institutions such as: University of Arizona (USA), University of Queens (Canada), Delft University of Technology (Holland), Colorado School of Mines (USA), École Polytechnique de Paris (France), University of Toronto (Canada), University of Queensland (Australia) and Universidad Politécnica de Madrid (Spain), among others. Student exchange opportunities both at undergraduate and graduate levels take place every year with our partner institutions. Our students also develop internships and research in the mining industry.

Department of Mining Engineering

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MINING ENGINEERING PUC CHILE



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Mission

Our purpose is to educate and inspire leaders for the mining industry who build strong organizations and wisely leverage the capacities of the organizations and people they work with. Our department has focused in creating an outstanding education and research environment where our students, faculty and industry partners are enhanced to collaborate with the main objective of changing the way mining think about complex problems by leading cutting edge research in the area.



Undergraduate education

The PUC Chile Mining Engineering Department covers undergraduate programs in Civil Industrial Engineering and Civil Engineering both with diploma in Mining. Our undergraduate program is built on three pillars:

- **Engineering Sciences**, to promote in our students a systemic process vision of mining operations.
- **Engineering Economics and Finance**, to nurture in our engineers to take sound decisions based on evidence to leverage sustainable business development.
- **Management Sciences**, oriented to the development of work team values, positive leadership, and life-long learning attitude. We expect our professionals to become agents of change for the mining industry and society as a whole.

Graduate education

The PUC Chile graduate program provides research opportunities leading to Master of Engineering, Master of Science Engineering and Doctor of Science Engineering.

Research

Our graduate students perform research in the following themes:

Mineral Processing: Optimization of Mineral and Metallurgical Operations of Copper Extraction, Leaching and Bioleaching, Comminution and Flotation, Efficiency in Energy and Water consumption.

Mine Planning and Mining Operations: Optimization of mining operations, drilling, blasting, load and haul, mining technology management.

Mineral Economics: Market analysis, prices of mineral commodities, availability of resources, international trade, government and corporate policies, efficient use of resources, business and management of mining companies.

Project evaluation and Management of Risks in Mining: Mining projects assessment, financial risk evaluation, investment decision making in mining.

Physical Asset Management: Maintenance management in mining, capital asset replacement policies, spare-parts supply chain analysis, redundancy analysis.

Applied Mathematics in Mining Processes: Development of mathematical models and mining processes optimization.

Mining sustainability: Environmental management, risk assessment, life cycle analysis, dust mitigation issues.

Safety and Occupational Health in Mining: Risk analysis in unitary operations, root cause analysis of mining accidents, professional diseases in mining, safety technology, regulation and labor risk

Academics



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