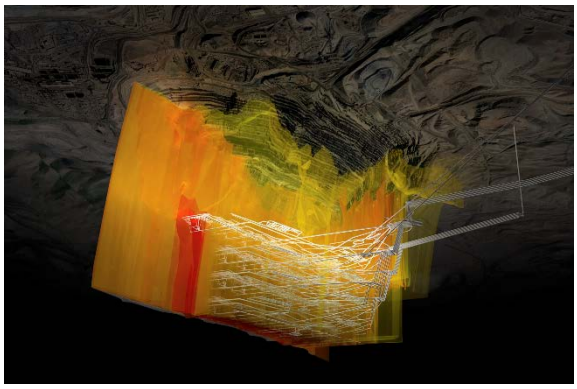
Ingeniería de Minas
FACULTAD DE CIENCIAS
FÍSICAS Y MATEMÁTICAS
UNIVERSIDAD DE CHILE

Master in Mining Engineering



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1. Introduction

The Master in Mining Engineering program aims to contribute to the formation of qualified Engineers, Geologists, and Geophysicists that want to conduct scientific and technological research in Mining Engineering. The Master in Mining Engineering has also a professional orientation for those candidates interested on advising agencies, companies and private institutions, bout in the domestic and the international market.

The program considers a research project (thesis) and a group of basic and advanced courses in subjects related to this discipline. Mining engineering courses are multidisciplinary, touching upon elements of geology, physics, chemistry, environmental studies, mathematics, and economics. You will gain a thorough understanding of the research areas of your interest:

Geomechanics

Mine Sustainability

Mine technology

Mineral Economics

Geo-Statistics

Mine planning

A Masters in Mining Engineering will give you a better understanding of how the different extraction methods works, providing you the tools for understanding how mining systems interact with other disciplines, the community, the market, and the environment.

2. How to apply?

Students wishing to apply for Master programs offered by the Faculty of Physical and Mathematical Sciences, must have a bachelor or a professional degree in a similar area, granted by a national or international university certifying a solid background in the specific area of the master program. The Academic Committee will review each application taking into account the candidate's background.

The application to the program is through the Graduate School of the Faculty of Physical and Mathematical Sciences:

Apply here[1]

Deadline	Program start
May	Spring Semester (August)
October	Fall Semester (March)

[1] https://ucampus.uchile.cl/m/fcfm_postgrado_postulacion/

Applicants have to submit all their educational records at the moment of application, including:

- **Resume**
- **Certified translation of Bachelor's diploma into English if not originally in Spanish or English.**
- **Official certificate of the Academic Record or Grades** from all academic institutions of higher education you list in your application (after and not including high-school). English or Spanish translation are required during application.
- **Motivational letter**
- **Two letters of recommendation.**

If required, prospective candidates might be interviewed by the Academic Committee to known their research interest and their motivation.

Even though is not mandatory, we strongly encourage candidates to contact one of the Faculty members[2] before applying. You may ask to your potential supervisor information about research opportunities and funding. Send an e-mail including a CV and a brief description of your interests.

The Academic Committee of the Program will recommend acceptance or refusal of the applications to the Graduate School of the Faculty of Physical and Mathematical Sciences.

Admission is competitive, so please carefully prepare your application.

Additional information/ documents might be asked for foreign students including:

- Certificate of Academic Record with a table and its equivalent with the Chilean system. The grade scale in Chile goes from 1,0 to 7,0.
- Once you are accepted, you have to provide a certified translation of your **Bachelor's diploma into Spanish endorsed by** the Chilean Foreign Ministry or Ministry of Education (in Chile) or the Chilean Consulate in your origin country.

Accepted foreign students must apply at the corresponding Chilean Consulate for a student visa before arriving. It is very **important that you deal with the immigration formalities before entering Chile** and to prepare several documents. A tourist visa will not be accepted.

You can find information about the Chilean consulates and Embassies around the world in the following link:

http://chile.gob.cl/en/consulados/

[2] http://www2.minas.uchile.cl/department-of-mining-engineering/faculty/126224/full-time

General Observations:

1. Diplomas must be issued by an official and competent authorities of each university.

2. Accepted candidates that have already completed courses/exams related to the areas of research of the Master, may apply for course recognition. Based on the information provided by the candidate, the Committee will decide which courses/exams can be transferred.

   Interested candidates must fill out a specific Form provided by the Graduate School (postgrado@ing.uchile.cl). The Form must be submitted to the Graduate School accompanied by the approval of the Committee and an official certificate of the Academic Record or Grades.

3. Fees and financial support

a. Tuition

Tuition cost: UF 300 (full program – ask for different payment methods)

The UF value may be consulted at the Banco Central de Chile

(http://si3.bcentral.cl/Indicadoressiete/secure/Indicadoresdiarios.aspx)

b. Financial support

There are possibilities of compensation or financial assistance for student teaching assistantships for undergraduate and graduate, along with participation in a research project related to their thesis. Remuneration and financial aid are competitive and there is no guarantee that all the applicants will obtain it. For more information, contact directly the potential supervisor.

c. Scholarships

The AGCI provides a number of scholarships for Latin American students who begin studies in Chilean Master programs accredited for 4 years. This includes full payment of tuition and resources for student maintenance.

- For further information, visit: http://www.agci.cl/becas.html
- For foreign applicants: http://www.agci.cl/becasextr.html

On the other hand, CONICYT give scholarships to Master students of accredited programs.

- Further information at: http://www.conicyt.cl/becas/index.html

4. Characteristics of the program

The program last approximately 3 semesters, including the development of a thesis. To obtain the Master degree, it is required:

- Minimum residence of 2 semesters and max.
- Duration of the program: Maximum 6 semesters for full time students, and 10 semesters for part time students.
- The approval of all courses (90 credits) with grades not less than 5,0.
- The approval of an exam.

The Master in Mining program presents a flexible format that encourages the admission of both full time students and industry professional who can only devote part of their time to specialization studies.

a. Courses

i. Mandatory Courses (18 credits)

Mandatory courses meet the goal of delivering basic and common training to all program participants.

- **MI5041 Ore Body Evaluation (6 credits)**
- **MI5051 Sustainability in Mining (6 credits)**
- **MI5071 Mining Systems (6 credits)**

ii. Elective Courses (24 Credits)

The student must register for 4 courses of 6 credits each, in agreement with the Supervisor. Some alternatives are:

Code	Course	Credits
MI5072	**Simulation of Mining Processes**	**6**
MI5073	**Mine Planning**	**6**
MI5081	**Mineral Economics**	**6**
MI5082	**Management and Evaluation of Mining Projects**	**6**
MI6041	**Geostatistical Simulation**	**6**

MI6061	**Numerical Modelling in Rock Mechanics**	**6**
MI6071	**Drilling and Blasting**	**6**
MI6072	**Mine Design**	**6**
MI6081	**Management of Mining Operations**	**6**
MI6144	**Leadership in Mining**	**6**
MI8130	**Data Analysis in Mining Engineering**	**6**
MI73A	**Directed Work**	**6**
MI75D	**Advanced Topics in Ore Body Evaluation**	**6**
MI75D	**Multivariable Geostatistics**	**6**
MI75G	**Geostatistical Project**	**6**
MI75E	**Advanced Topics in Mine Planning**	**6**
MI75H	**Mine Planning Laboratory**	**6**

iii. Thesis

The Thesis project consists of an individual work where the student must demonstrate its ability to conduct basic or applied research in the Mining Engineering. It also considers the ability of the candidate to develop critical analysis, to propose solutions, and to explain them in a clear and comprehensive way. To ensure a proper progress in research, semester progress reviews will be established through public presentations of the subject. With this purpose, the student must enroll these courses:

- MI7908 Seminar of Thesis Preparation (3 credits)
- MI7909 Thesis I (21 credits)
- MI7910 Thesis II (24 credits)

5. Research Areas

The main research groups related to the Master's program are:

Geomechanics

Mine technology

Geo-Statistics

Mine Sustainability

Mineral Economics

Mine planning

However, the student, in agreement with the supervisor may decide to focus others areas different from above.

6. Facilities

The Beauchef campus has about 130,000 m2 of floor area. Both the Faculty and the Department of Mining Engineering, have modern infrastructure of laboratories, equipment and support services, some of which represent unique facilities in Chile.

All researchers and students have access to the Central Library of the Faculty of Physical and Mathematical Sciences, one of the most modern in the country, which allows the user to access existing national and international publications at the highest level. The Central Library has more than 120,000 volumes of books on open shelves, three thousand titles of printed journals and more than 52,000 digital. All graduate students have computer and Internet access facilities.

The Faculty offers its students a pleasant environment with recreational areas, a gym, study rooms, multi-courts and others. The Beauchef campus has a multi-court, an equipped gym with machines and a sports gym for students

7. Contact

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