



Cooperation of four universities

Facing the crucial need for high level education in Georesources Engineering, four top level mining schools in Europe have decided to join their efforts and organize an Erasmus Mundus Master program:

- Université de Liège (ULg – main coordinator)
- Ecole Nationale Supérieure de Géologie de Nancy (ENSG)
- Luleå University of Technology (LTU)
- Technische Universität Bergakademie Freiberg (TUBAF)

Master Program

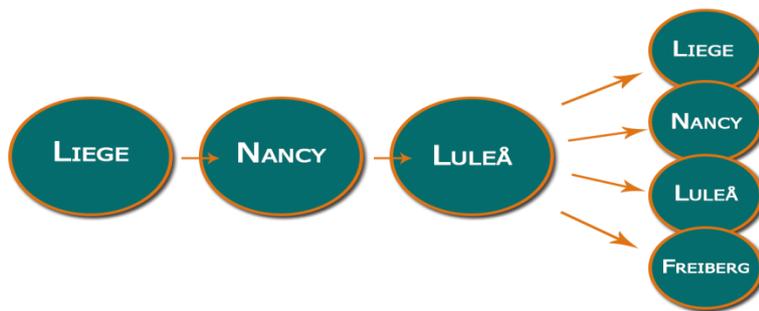
This two-year full English (120 ECTS) Master Program educates a new generation of young professionals integrating a perfect knowledge of available mineral/metal resources and modern engineering technologies. They will develop a broad and multidisciplinary view from cradle (resources extraction) to grave and beyond (resource recycling). Modern computer-based technologies used in resource characterization (digital imaging, tomography,...) and in resource modelling (geostatistics, 4D GIS,...) is the backbone of this degree with the objective to train skilled engineers capable of using the most advanced exploration and modelling technologies available. A strong network of associates (universities and industrials) makes sure that the master program stays in tune with professional requirements and that all students can benefit from world class training internships before graduating.

Georesources characterization	15 - 20 ECTS
Georesources modelling	17.5 - 30 ECTS
Georesources processing	30 - 42.5 ECTS
Georesources management	10 ECTS
Master thesis (and possible internship)	30 ECTS
TOTAL (the distribution of the 120 ECTS might differ from a student to another depending on their background)	120 ECTS

Student Mobility

EMerald considers that it is essential to foster student networking and team spirit. Sharing for two years a common experience of high level education and intense social events creates a very strong sense of community that will last during their professional live. Therefore, the student mobility scheme is kept as linear and simple as possible. The intention is to allow each student to get to know the complementary partner institutions and give them the opportunity to study and complete a master thesis project in any of these institutions. Associate universities and industries provide opportunities for research and internships.

Mobility Scheme by semester



Multiple Degree

Liege offers leveling courses to all incoming students and is in charge of teaching basic courses in Ore Geology, Mineral Processing and Recycling. Nancy introduces students to the basics of Orebody modeling and Ore reserve estimation while at the same time allowing them to practice in pilot plant facilities. In Luleå, students deepen their knowledge in mining geology and mineral processing. They get acquainted with modelling of unit operations and get unique opportunities for field trips and plant visits. During the last semester, EMerald students are offered to join one of the four partner universities depending on the subject they want to specialize into during their master thesis.

EMerald delivers a triple diploma:

- Ingénieur Civil des Mines et Géologue (Belgium)
- Master en Géosciences : planètes, ressources, environnement (France)
- Master in Geosciences Engineering (Sweden)

Strategic Advisory Board

The SAB made of industrial representatives has been set up as a consultative branch of the program. The members of the SAB have different duties: they suggest, organize and lead professional seminars, they offer and sponsor internships and master thesis, they organize guided technical visits to some facilities in Europe among other things.

Associate network of international universities

Associates have the opportunity to welcome Emerald students for their master thesis.

▶ UCT - Capetown (ZA)	▶ UQ - Brisbane (AU)
▶ UChile - Santiago (CL)	▶ MISIS - Moscow (RU)
▶ Hacettepe Univ - Ankara (TR)	▶ UFMG - Belo Horizonte (BR)
▶ Univ Oulu (FI)	▶ East Kazakhstan TU (KZ)

Student Recruitment

Selection of candidates is a cooperative process between partner institutions and is based on a consensus. Eligible candidates must have a Bachelor degree of minimum 180 ECTS (minimum 3 years undergraduate program) in the area of Engineering, Chemistry, Geology, Earth Sciences, Metallurgy or similar. At least 22.5 ECTS in Mathematics at university level are required.





Selected students

The program was launched in September 2013. In two years, 38 students from 27 different countries have enrolled in the program. We are expecting about 15 more registrations for the next academic year.

Fees and Funding

Participation costs for Emerald are 8000€/year for non-EU students and 4000€/year for EU students. Both EU and non-EU students can apply for an Erasmus Mundus scholarship granted by the EACEA (Education, Audiovisual and Culture Executive Agency).

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