

EMERALD
Master Course in Georesources Engineering

Duration: 24 months

Course description:

Context: The future and sustainability of our societies is critically linked to the availability of raw materials and to the enhanced efficiency of all processes involved throughout their life-cycle. There is a critical need, especially in Europe, to educate engineers through an innovative curriculum bridging the gap between georesources and advanced processing technologies. Europe has top level engineering schools with a long tradition in these fields. Through a joint effort LTU, TUBAF, ULg and UL will provide a unique network of excellence for teaching and research in the field of georesources engineering.

Setting up an Erasmus Mundus Master Degree backed by a strong network of academic and industrial associates is a unique opportunity to give these partner universities a flagship role and increase their worldwide visibility and reputation. Multiple Degree: This Erasmus Mundus project is based on existing study programs of the partner universities. The consortium is able to deliver a triple diploma. Student Recruitment: Selection of candidates is a cooperative process between partner institutions and is based on a consensus.

The program is aimed at candidates having a Bachelor in Engineering with basic knowledge in geology. Master Program: The master program is a 2 year (120 ECTS) program. The program aims at finding the right balance between knowledge of mineral resources (geology, resource characterisation, reserve estimation, modeling) and processing (comminution, preconcentration, concentration, leaching, waste disposal,...). The program also includes a broader view on life cycle analysis of mineral resources and urban mining potential. It includes a series of professional seminars to shed light on strategic issues, economic and environmental challenges, social dimensions of mining operations, etc. The geometallurgical perspective on mineral resources is at the heart of the program philosophy. Modern teaching involving project-based learning and field work will be promoted throughout the cursus. Student Mobility: EMerald considers that it is essential to foster student networking and team spirit. 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 partner institutions and give them the opportunity to study and elect a master thesis project in any of these institutions. Associate universities and industries on all continents provide opportunities for research, internships and future jobs. They also contribute top-level scholars in the field of georesources engineering. Liege has the mission to welcome students and make sure they have the desired background, Nancy is responsible for more advanced knowledge in georesources modeling and Lulea takes care of a more in depth education in mineral resources and processing. All four universities offer specialized courses in their field of expertise and host students for their master thesis.

Website: em-georesources.eu

Partners:

UNIVERSITÉ DE LIÈGE, Belgium (Co-ordinating Institution)
UNIVERSITÉ DE LORRAINE, France
TECHNISCHE UNIVERSITÄT BERGAKADEMIE FREIBERG, Germany
LULEÅ TEKNISKA UNIVERSITET, Sweden

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