

ERASMUS MUNDUS PROGRAM

International Master in Advanced Clay Science (IMACS)

Duration: 2 years

Course description:

Objectives: The “International Master in Advanced Clay Science” (IMACS) provides the competence, fundamental knowledge and skill necessary to perfectly assimilate the recent developments in clay science and their applied perspectives. The term “clay science” is used in its widest sense as it covers a very large and multidisciplinary domain, with career prospects in the cement and ceramics industry, civil engineering, geotechnics, nanotechnology, pedology, geology, medicine, cosmetic industry, mineralogy - crystallography, foods, paper and paint industry, petroleum and mining industry, environmental cleanup, groundwater protection. The multi-disciplinarity of the IMACS courses is unique in the world.

The program provides a complete background on the fundamentals of clay minerals and skills in the main fields of clay science and technology as well as an in-depth professional specialization in 2 of the following fields:

- Environment, Soil and Geological system
- Geomaterials and Civil Engineering – Assessment and processing
- Advanced clay, Nanomaterial
- Healing minerals

Content: The structure of the course offers a 2-year training period, including 2 periods of professional practice and research (4 and 6 months), both rich and robust.

First year: An integrative period (including French language training and a field trip) is followed by an extended scientific programme on the fundamentals of Clay Science including identification and analytical methods, and physico-chemical properties. The fundamentals of the course are acquired in UP where lectures are delivered by internationally recognised experts. Language training (FR, EN, PT) is also delivered during this period. A compulsory mobility is planned from April to July for practical project works. To share their own experiences during this project period, a scientific meeting dedicated to students will be organised jointly with the French Clay Group and possibly with other Clay associations.

Second year: Two elective specialisation fields in 2 institutions are followed by a Master Thesis in one of the institutions of the consortium.

Fundamentals and themes linked to “Environment, Soil and Geological system” are given by UP (with the participation of international experts for the Fundamentals); “Advanced clay, Nanomaterial” are given by UO; “Geomaterials and Civil Engineering - Assessment and processing” are given by TUC; and “Healing minerals” are given by UA. Elective courses in relation with mineral resources are given by UFRGS.

At the end of the curriculum, students are awarded in Poitiers during a farewell congress. The teaching language is mainly English.

Degree awarding: The completion of the curriculum is rewarded by a multiple Master Degree and a Diploma Supplement describing personal curriculum contents.

Application: The Masters Course is opened to students having acquired a good bachelor degree, and a fluent understanding of the English language. Application deadline: 31st January each year, unless otherwise stated.

Website: www.master-imacs.org

Partners:

UNIVERSITY OF POITIERS, France (Co-ordinating institution)
TECHNICAL UNIVERSITY OF CRETE, Greece
OTTAWA UNIVERSITY, Canada
FEDERAL UNIVERSITY OF RIO GRANDE DO SUL, Brazil
UNIVERSITY OF AVEIRO, Portugal

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