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NEW Europeans are eligible for
Erasmus Mundus Scholarships!

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Erasmus Mundus MSc Course in

MathMods

Mathematical Modelling
in Engineering:
Theory, Numerics, Applications

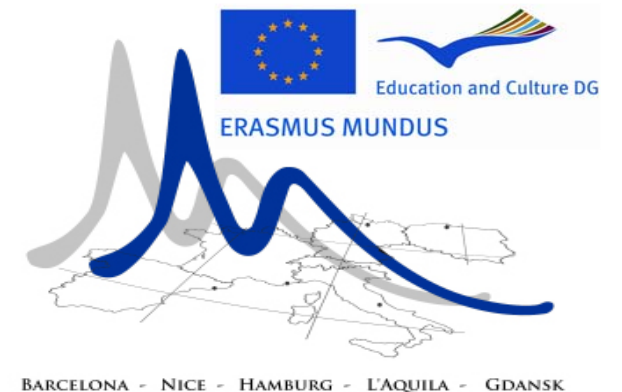
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MATHMODS PROGRAMME

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What is Erasmus Mundus?

Erasmus Mundus is a cooperation and mobility programme in the field of higher education which promotes the European Union as a *worldwide* centre of excellence in learning. The programme supports European top-quality master's courses and enhances the visibility and attractiveness of European higher education in *third countries*, providing EU-funded scholarships.

What is MathMods Programme?

MathMods is a two-year MSc programme (120 ECTS) within 5 European universities, providing students with a cross-cultural education while getting acquainted with both theory and applications of mathematical modelling in engineering.

Aims

Mathematical modelling lies at the heart of most current technological innovations and has become a fundamental tool in many fields of engineering. Essentially multidisciplinary in its applications, mathematical modelling and simulation is in its own right a key technology which is bound to increase its presence within efficient industries and businesses. The proposed programme reflects this multidisciplinary nature, drawing on the unifying mathematical aspects from the various and often separate engineering disciplines.

MathMods Consortium

MathMods is a consortium of five European universities coordinated by the

- University of L'Aquila in Italy (**UAQ**) and involving the following institutions:
- Autonomous University of Barcelona in Catalonia, Spain (**UAB**)
- University of Hamburg in Germany (**UHH**)
- Gdansk University of Technology in Poland (**GUT**)
- University of Nice - Sophia Antipolis in France (**UNSA**).

Study Programme

MathMods MSc course is divided into four semesters. Each semester totals 30 ECTS credits.

Mobility scheme will involve two institutions at least.

The **FIRST YEAR** is common for all students. This will guarantee an equal knowledge platform for all of them.

The **SECOND YEAR** will be divided into six branches, which reflect the field of excellence of each institution:

- *Advanced computational methods in material science (GUT)*
- *Mathematical modelling applications to biology and finance (UNSA)*
- *Mathematical models in life sciences (UAQ)*
- *Modelling and simulation of electronic devices (UAQ)*
- *Modelling, simulation, and optimization of complex systems (UHH)*
- *Stochastic modelling and optimization (UAB).*

First Semester

THEORY

at UAQ, Italy

Second Semester

NUMERICS

at either UNSA, France or UHH, Germany

Third Semester

APPLICATIONS

at 1 of the 5 institutions

Fourth Semester

MASTER THESIS

at 1 of the 5 institutions

Language

The language of the whole programme will be exclusively English at each of the five universities. Students will also have to attend a local language course during the semester they will be spending at each partner institution.

Requirements

Applicants must have obtained a recognized Bachelor's Degree (BS, BSc, SB, etc.) – or a degree at the level of a Bachelor's Degree, for instance its equivalent from a college, university, or technical school of high standing, or 180 ECTS credits in the European system – in Mathematics, Applied Mathematics, Physics, Engineering with a large background in Mathematics.

All applicants whose native language is not English are required to prove a satisfactory level of spoken and written English, certified by TOEFL (550 points), IELTS (6.0 points) or equivalent.

Scholarships

This year the European Commission offers 20 Erasmus Mundus scholarships to both European and non-European students. These scholarships amount to:

- EUR 48,000.00 (non-EU students)
- EUR 20,000 (EU students)

to cover the two year expenses and are granted to the most promising applicants.

How to apply?

The application for MathMods programme and the submission of all the required documents must be made on-line. Applicants will find instructions and the link to the on-line form on MathMods web-site: www.mathmods.eu

Deadline for Scholarships

- ✓ **31 December 2009** for non-EU students
- ✓ **15 May 2010** for EU students

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