

GIS'EM - Intensive Programme on GIS in Environmental Management

4th March – 15th March 2013,
Eberswalde Germany

Geographic Information Science as a background

Geoinformatics is a field of science that researches spatial information and any other parameter connected to spatial data, geography, geosciences and related branches of engineering, including environmental management. Geographic information systems (GIS) are developing very rapidly and new applications for various purposes are created as well. Today, GIS provide essential methods and tools to store and manipulate spatial data, in the context of planning and monitoring processes of the environment. Most professionals working in the field of natural resources and environmental management need theoretical knowledge and methods as well as practical skills on GIS.

Why an Erasmus Intensive Programme?

The subject of the Erasmus GIS IP is highly relevant to the applied science education across Europe and it is necessary to combine the expertise and knowledge on different fields of geoinformatics to educate future GI professionals. The practical applications of GIS may vary by the field of science and local conditions but the same principles, methodology and software are widely used internationally. Thus, working collaboratively with GIS in multinational groups is an important skill for future GIS professionals.

The multidisciplinary approach will offer a large variety of several GI Science applications and enable students and teachers with different educational, professional and cultural background to work together in multinational groups to gain new perspectives on the topic being studied.



GIS'EM participants on the top of the Ukko-Koli in June 2012.

Contents of the Intensive Programme

The aim of the IP is to enhance the student's knowledge and skills in geoinformatics, especially, in applying GIS methods and tools in modern forestry, bio-energy, precision agriculture and environmental monitoring and management. This IP provides solid theoretical background and comprehensive practical application through composition and integration of a range of spatial data applications.

On the completion of this course, students will have a realistic understanding of most recent GI models to support decision makers about recommended environmental monitoring, modeling. Management methods and sustainable environmental land-use and management opportunities will be discussed based on Multi-Criteria Evaluation and Multiple Objective Decision frameworks. Furthermore, excellent and tested methods and applications of GIS in various fields can be shared among the participants.

The following topics and GIS applications will be covered within the GIS'EM IP

- » Introduction to GIS in environmental planning and natural resources management
- » Acquisition and management of spatial data with particular emphasis on remote sensing for inventory and monitoring of natural resources and environment
- » Forest inventory and forest management planning
- » Logistics of bioenergy management planning
- » REDD and monitoring of global phenomena
- » Precision agriculture and soil management
- » Wildlife management, analysis of spatial animal positioning data
- » Coastal management, measuring human interactions; health and GIS
- » Possibilities of open source GIS applications
- » Expert presentations from invited GIS enterprises
- » Enhanced GIS-based problem solving capacities
- » Project working in international groups

An additional cultural and leisure programme will be available

- » Visit to Niederfinow (Schiffshebewerk) - Oder Havel- Canal and visit to Nature Reserve Schorfheide Chorin and Eco-Production Village Brodowin
- » Visit to Potsdam (trad. Techn. Surveying at Telegraphenberg) and Potsdam Prussian palaces and gardens UNESCO world Heritage and other cultural and historical venues in Potsdam and its surroundings

WHO CAN APPLY?

This IP is planned as an advanced module for bachelor and master level students of partner institutes. Each participating institute will choose individually their particular students to participate by a separated application. To become eligible for an application students need to have both theoretical and practical competence of GIS.

Applicants are invited to send their applications to the contact person of their home institute. GIS'EM IP will cover the subsistence costs and 75 % of the travel costs of participating students and teachers.

Partner organisations and contact persons

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