# Compendium 2009

# Erasmus Mundus Action 1

**Masters Courses Joint Doctorates** 



### Erasmus Mundus Programme: Action 1

Erasmus Mundus Masters Courses Erasmus Mundus Joint Doctorates

2009 Compendium

### More information about Erasmus Mundus on line:

**Education, Audiovisual and Culture Executive Agency:** 

http://eacea.ec.europa.eu/erasmus\_mundus/index\_en.php

**European Commission, Directorate-General for Education and Culture:** 

http://ec.europa.eu/education/external-relation-programmes/doc72\_en.htm

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### **Agricultural and Forestry Sciences**

AFEPA - European Master in Agricultural, Food and Environmental Policy Analysis

AGRIS MUNDUS - Sustainable Development in Agriculture Masters Course

EM-ABG - European Master in Animal Breeding and Genetics

FOOD OF LIFE

IMHS - International Master in Horticultural Sciences

IMRD – International Master of Science in Rural Development

Master International Vintage – Master International Vintage, Vine, Wine and Terroir management

MSc EF - Master of Science in European Forestry

SUFONAMA – Sustainable Forest and Nature Management

SUTROFOR - Sustainable Tropical Forestry Erasmus Mundus Masters Course

VINIFERA EuroMaster – European Master of Science of Viticulture and Enology

### Architecture, urban and regional planning

EMDIREB – European Master in Diagnosis and Repair of Buildings

EMTM - European Master in Tourism Management

EURMed (Etudes Urbaines en Régions Méditerranéennes)

MACLANDS - MAster of Cultural LANDScapes

MUNDUS URBANO – Interdisciplinary Erasmus Mundus Master Course International Cooperation and Urban Development

### Art and design

MAIPR - Master of Arts in International Performance Research

MCEMESV - Master Conjoint Erasmus Mundus en Etude du Spectacle Vivant

### **Business Studies, management science**

EMIN – Economics and Management of Network Industries

EMSD – European Master programme in Systems Dynamics

EMSRHS – European Master in Sustainable Regional Health Systems

EMTM – European Master in Tourism Management

Europubhealth – European Public Health Master

IMIM – International Master in Industrial Management

IMMIT – International Master in Management of Information Technology

IMSE – International Master in Service Engineering

Master International Vintage – Master International Vintage, Vine, Wine and Terroir management

MESPOM - Master of Science in Environmental Sciences, Policy and Management

MSPME - Masters in Strategic Project Management

### **Communication and information sciences**

DILL - International Master in Digital Library Learning

EMDC - European Master in Distributed Computing

EMSD – European Master programme in Systems Dynamics

EMMSP - Erasmus Mundus Master of Science in Photonics

EUROMIME – Master européen en Ingénierie des Médias pour l'Education

LCT- European Masters Program in Language and Communication Technologies

MAPNET - Masters on Photonic Networks engineering

### **Education, teacher training**

EMELE – Multiculturalism: Master degree in Learning and Teaching of Spanish in Multilingual and International Contexts

EUROMIME - Master européen en Ingénierie des Médias pour l'Education

IMEC - International Master in Early Childhood Education and Care

MA LLL – European Master's in Lifelong Learning: Policy and Management

MUNDUSFOR – Formation de professionnels de la formation

### Engineering, technology

ATOSIM - Atomic Scale Modelling of Physical, Chemical and Bio-molecular Systems

CEMACUBE - Common European Master's course in Biomedical Engineering

COMEM Erasmus Mundus MSc - Coastal and Marine Engineering and Management

COSSE - Computer Simulation For Science and engineering

CSSM - Complex Systems Science

DMKM – Data Mining & Knowledge Management

ECOHYD – Erasmus Mundus Master of Science in Ecohydrology

EEM-Nano - Erasmus Mundus Master in Nanoscience and Nanotechnology

EMARO - European Master in Advanced Robotics

EMDC – European Master in Distributed Computing

EMECS - European Master Embedded Computing Systems

EMIN – Economics and Management of Network Industries

EMMEP - Erasmus Mundus Minerals and Environmental Programme

EMSHIP - European Education in Advanced Ship Design

Erasmus Mundus Master of Science in Photonics

EU4M - European Union Master's Course in Mechatronic and Micro-mechatronic Systems

EURHEO - European Masters in Engineering Rheology

EuroAquae – Euro Hydroinformatics and Water Management

EuroPhotonics – Master in Photonics Engineering, Nanophotonics and Biophotonics

euSYSBIO - Erasmus Mundus Master's Course in euSYSBIO Systems Biology

FUSION-EP – European Master in Nuclear Fusion Science and Engineering Physics

GIM – MSc in Global Innovation Management

IMACS - International Master in Advanced Clay Science

IMFSE - International Master of Science in Fire Safety Engineering

IMMSSET – International Master in Materials and Sensors Systems for Environmental Technologies

JEMES – Joint European Master Programme in Environmental Studies

M.E.S.C. – Materials for Energy Storage and Conversion

Mamaself – Master in material science exploring European large scale facilities

Mapnet - Masters on Photonic Networks engineering

Master international Vintage - Master International Vintage, Vine, Wine and Terroir management

MATHMODS - Mathematical Modelling in Engineering: Theory, Numerics, Applications

MCSM - Master of Science in Computational Mechanics

ME3 – European joint Masters in Management and Engineering of Environment and Energy

MEEES – Masters in Earthquake Engineering and Engineering Seismology

MERIT - Master of Science in Research on Information and Communication Technologies

MESPOM - Master of Science in Environmental Sciences, Policy and Management

MONABIPHOT – Molecular nano- and bio-photonics for telecommunications and biotechnologies

NordSecMob – Masters programme in Security and Mobile Computing

OPSCITECH - Optics in Science and Technology

SAMHC - Advanced Masters in Structural Analysis of Monuments and Historical Constructions

SEFOTECH.NUT - European MSc in food science, technology and nutrition

Select – Environomical Pathways for Sustainable Energy Systems

THRUST - Erasmus Mundus Master's Course in TurbomacHinery aeRomechanic UniverSity Training

VIBOT – European Master in Vision and Robotics

### Geography, earth and environmental studies

AGRIS MUNDUS - Sustainable Development in Agriculture Masters Course

ECOHYD - Erasmus Mundus Master of Science in Ecohydrology

EMMEP – Erasmus Mundus Minerals and Environmental Programme

EuroAquae – Euro Hydroinformatics and Water Management

IMACS - International Master in Advanced Clay Science

IMMSSET - International Master in Materials and Sensors Systems for Environmental Technologies

IMRD - International Master of Science in Rural Development

MESPOM – Master of Science in Environmental Sciences, Policy and Management

MsGTMaster of Science in Geospatial Technologies

SpaceMaster – Joint European Master in Science and Technology

SUTROFOR - Sustainable Tropical Forestry Erasmus Mundus Masters Course

### **Health sciences**

AFEPA – European Master in Agricultural, Food and Environmental Policy Analysis CEMACUBE – Common European Master's course in Biomedical Engineering

EMCL - European Masters in Clinical Linguistics

EMSEP - European Masters in Sport and Exercise Psychology

Europubhealth - European Public Health Master

Food of Life

MBIO - Master of Bioethics

PHOENIX EM - Dynamics of Health and Welfare

Troped – European Master in International Health

### **Humanities**

EMGS - Global Studies - A European Perspective

**EUROCULTURE** 

EuroPhilosophie – Philosophies allemande et française dans l'espace européen

GEMMA - Master's Degree in Women's and Gender Studies

GLITEMA – German Literature in the European Middle Ages

IMQP – International Master in Quaternary and Prehistory Master International en Quaternaire et Préhistoire

MBIO - Master of Bioethics

### Languages and philological sciences

CLE - Master/Laurea Specialistica en Cultures Littéraires Européennes

EMCL – European Masters in Clinical Linguistics

EMELE – Multiculturalism – Master degree in Learning and Teaching of Spanish in Multilingual and International Contexts

GLITEMA – German Literature in the European Middle Ages

IM in NLP & HLT – International Masters in Natural Language Processing and Human Language Technology

LCT- European Masters Program in Language and Communication Technologies

#### Law

EMLE - European Master in Law and Economics

EMTTLF - European Master's in Transnational Trade Law Finance

### Mathematics, informatics

Algant – International integrated Master course in Algebra, Geometry and Number Theory

CIMET - Color in Informatics and MEdia Technology

COSSE - Computer Simulation For Science and engineering

CSSM - Complex Systems Science

DMKM - Data Mining & Knowledge Management

EMCSE - European Masters Course in Software Engineering

EMDC - European Master in Distributed Computing

EMECS - European Master Embedded Computing Systems

EuroAquae – Euro Hydroinformatics and Water Management

euSYSBIO - erasmus Mundus Master's Course in euSYSBIO Systems Biology

IM in NLP & HLT – International Masters in Natural Language Processing and Human Language Technology

IMSE - International Master in Service Engineering

MATHMODS - Mathematical Modelling in Engineering: Theory, Numerics, Applications

MERIT - Master of Science in Research on Information and Communication Technologies

QEM - Models and Methods of Quantitative Economics

### **Natural sciences**

ASC – Master of Science: Advanced Spectroscopy in Chemistry

AstroMundus - Astrophysics

ATOSIM - Atomic Scale Modelling of Physical, Chemical and Bio-molecular Systems

COSSE - Computer Simulation For Science and engineering

CSSM - Complex Systems Science

ECOHYD - Erasmus Mundus Master of Science in Ecohydrology

EEM-Nano - Erasmus Mundus Master in Nanoscience and Nanotechnology

EMAE - European Master in Applied Ecology

EMBC - Erasmus Mundus Master of Science in Marine Biodiversity and Conservation

EMQAL - European Joint Master in Quality in Analytical Laboratories

Erasmus Mundus Master of Science in Photonics

EUMAINE - European Master of Science in Nematology

EuroPhotonics – Master in Photonics Engineering, Nanophotonics and Biophotonics

euSYSBIO - erasmus Mundus Master's Course in euSYSBIO Systems Biology

FAME - Functionalised Advanced Materials and Engineering

Food of Life

FUSION-EP - European Master in Nuclear Fusion Science and Engineering Physics

IMQP – International Master in Quaternary and Prehistory Master International en Quaternaire et Préhistoire

M.E.S.C. – Materials for Energy Storage and Conversion

MBIO - Master of Bioethics

MEME - Erasmus Mundus Master Programme in Evolutionary Biology

MONABIPHOT - Molecular nano- and bio-photonics for telecommunications and biotechnologies

OPSCITECH - Optics in Science and Technology

SEFOTECH.NUT - European MSc in food science, technology and nutrition

Select – Environomical Pathways for Sustainable Energy Systems

SpaceMaster - Joint European Master in Science and Technology

TCCM – Euromaster on Theoretical Chemistry and Computational Modelling

### Social and cultural sciences, economics

AFEPA - European Master in Agricultural, Food and Environmental Policy Analysis

CoDe – Joint European Master in Comparative Local Development

EMCL - European Masters in Clinical Linguistics

EMGS - Global Studies - A European Perspective

EMIN - Economics and Management of Network Industries

EMLE - European Master in Law and Economics

EMMAPA - Erasmus Mundus Master in Adapted Physical Activity

EMSEP – European Masters in Sport and Exercise Psychology

EMSRHS - European Master in Sustainable Regional Health Systems

EMTM – European Master in Tourism Management

Europubhealth – European Public Health Master

GLITEMA - German Literature in the European Middle Ages

IMEC - International Master in Early Childhood Education and Care

IMESS - International Masters in Economy, State and Society

IMRD - International Master of Science in Rural Development

IMSE - International Master in Service Engineering

MA Human Rights Practice (Erasmus Mundus)

MBIO - Master of Bioethics

MEDEG - Economic Development and Growth

MEITEI – M.A. Degree in Economics of International Trade and European Integration

MESPOM - Master of Science in Environmental Sciences, Policy and Management

MISOCO – Joint European Master in International Migration and Social Cohesion

MUNDUS MAPP - Erasmus Mundus Master's in Public Policy

NOHA Mundus – Joint Master's Degree Program in International Humanitarian Action

PHOENIX EM - Dynamics of Health and Welfare

QEM - Models and Methods of Quantitative Economics

TPTI – Techniques, Patrimoines, Territoires de l'industrie: Histoire, Valorisation, Didactique

WOP-P – Master on Work, Organizational and Personnel Psychology

### **Erasmus Mundus Joint Doctorates**

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### Erasmus Mundus Joint Doctorates arranged per discipline

Note: some courses appear in more than one category

### **Agricultural and Forestry Sciences**

FONASO - Forest and Nature for Society

### **Communication and information sciences**

ICE - Interactive and Cognitive Environments

### Engineering, technology

EUROPHOTONICS - Doctorate Program in Photonics Enginneering, Nanophotonics and Biophotonics **EUROSPIN** - European Study Programme in Neuroinformatics SETS - Erasmus Mundus Joint Doctorate in Sustainable Energy Technologies and Strategies

ETeCoS3 - Environmental Technologies for Contaminated Solids, Soils and Sediments

ICE - Interactive and Cognitive Environments

### **Health sciences**

ENC Network - European Neuroscience campus network

### **Humanities**

INTERZONES - Cultural Studies in Literary Interzones

### Law

EDLE - European Doctorate in Law and Economics

EMJD-GEM - Erasmus Mundus Joint Doctorate on "Globalization, Europe & Multilateralism"

### Mathematics, informatics

ALGANT-DOC - Algebra, Geometry and Number Theory Joint Doctorate **EUROSPIN - European Study Programme in Neuroinformatics** ICE - Interactive and Cognitive Environments

### **Natural sciences**

EUROPHOTONICS - Doctorate Program in Photonics Enginneering, Nanophotonics and Biophotonics IDS-FunMat - International Doctoral School in Functional Materials for Energy, Information Technology, and Health EUROSPIN - European Study Programme in Neuroinformatics

IRAP PhD - International Relativistic Astrophysics Doctorate Program

### Social and cultural sciences, economics

EDLE - European Doctorate in Law and Economics EMJD-GEM - Erasmus Mundus Joint Doctorate on "Globalization, Europe & Multilateralism" INTERZONES - Cultural Studies in Literary Interzones

### Erasmus Mundus Masters Courses

### AFEPA European Master in Agricultural, Food and Environmental Policy Analysis

Duration: 2 years

### Course description:

The European Master in Agricultural, Food and Environmental Policy Analysis aims at providing a high quality education in designing and assessing public policies targeted to the agricultural and food sector as well as the rural environment. This European Master responds to the increasing need to better understand and anticipate the various and often complex socio-economic and environmental effects of these policies either in a functionning market economy as in the European Union or in economies in a development or transition phase. The European Master offers a two-year academic curriculum with integrated and advanced theoretical, methodological and empirical courses in economics and quantitative methods as well as in agricultural, food and environmental sciences, agricultural and trade policy, environmental and natural resource policy, rural development policy and agribusiness management and market analysis. To connect theory and methodology to practice, a problem solving project is developed and presented as a master's thesis at the end of the two-year curriculum.

The European Master is jointly organised by five leading European educational and research institutions: the Corvinius University of Budapest (CUB) in Hungary, the Swedish University of Agricultural Sciences (SLU) in Sweden, the *Rheinische-Friedrich-Wilhelms Universität Bonn* (UBonn) in Germany, the *Université catholique de Louvain* (UCL) in Belgium and the *Universitat Politècnica de Catalunya* (UPC) in Spain. These five partner universities are recognised worldwide for the quality of their educational programme and scientific achievements in agricultural, environmental and economic sciences. The required 120 ECTS credit points are structured into three blocks: a minimum of two semesters of studies (55 ECTS) at a first partner university, as well as two semesters of studies (60 ECTS) at a second partner university, and two joint summer schools (5 ECTS) at partner universities. The language of instruction and examination is English for most of the courses in three partner universities while it is either French at UCL or Spanish at UPC for most of the courses. The Master's degree is awarded as a double degree from the two home and host universities.

This European Master is accessible to candidates holding a bachelor's degree or a recognized equivalent academic degree with a minimum of 180 ECTS or 3 years university study from an accredited institution, with sufficient undergraduate training in economics and agricultural or environmental sciences, with an excellent scholastic average, and with fluency in English but also French or Spanish if attending either UCL or UPC respectively. Recipients of this European Master are qualified to understand the fundamentals of public policies oriented to the agricultural and food sector, rural areas and natural resources, develop and use quantitative methods to perform rigorous socio-economic and environmental assessment of these public policies, and provide sound and relevant policy recommendations for a more sustainable development of this sector and rural areas. They are qualified to take responsibilities in international, national and regional agencies, non-governmental organisations, consultancy firms, professional organisations and private companies.

Website: http://www.uclouvain.be/afepa

#### Partners:

CATHOLIC UNIVERSITY OF LOUVAIN, Belgium (Co-ordinating institution) CORVINUS UNIVERSITY OF BUDAPEST, Hungary SWEDISH UNIVERSITY OF ARGICULTURAL SCIENCES, Sweden UNIVERSITY OF BONN, Germany TECHNICAL UNIVERSITY OF CATALONIA, Spain

### Contact:

Bruno HENRY DE FRAHAN
Place de la Croix du Sud 2/15
1348 LOUVAIN-LA-NEUVE - Belgium
bruno.henrydefrahan@uclouvain.be

# AGRIS MUNDUS Sustainable Development in Agriculture Masters Course

**Duration: 2 years** 

### Course description:

The AGRIS MUNDUS Masters Course is a product of NATURA, the network of European universities with a tropical and subtropical orientation in agriculture. Since 1988, NATURA has collaborated closely with institutions in Asia, Africa and the Americas in providing post-graduate education and training opportunities. It focuses on improving the management of rural and agricultural development for disadvantaged populations. The approach utilised stresses the mobility of people throughout the network, allowing different disciplines to exchange experiences and reinforcing a common high-quality standard in education and training.

This specific course provides its students with the skills and understanding to deal with current global and international concerns in agriculture and rural development. Graduates will be qualified to identify and critically analyse key factors shaping the development of crop and animal production, the management of rural development projects and, finally, the sustainable use of natural resources. They will be trained to formulate and provide effective and appropriate responses to complex agricultural and environmental issues.

Students can specialise in one of six fields: agricultural systems research & development, horticultural crops management, livestock production & systems, land and water management, food, nutrition &health, or rural local development.

The mobility track of this programme involves a year's study in one university followed by a year in a second institution in a different country. There are 11 possible combinations for the student to choose from. The fourth semester of the Course is devoted to thesis work, with double supervision.

The staff/student ratio is approximately one professor to every two students. The language of study will be English, Spanish, Italian, French or a combination of these, depending on the track the student chooses. Students will be awarded two nationally-recognised Masters degrees from the two hosting universities, together with a specific NATURA Masters certificate in Sustainable Development in Agriculture. They will also receive a joint Diploma Supplement which outlines the nature, level, content and status of their studies, the study courses attended and the professional training acquired.

Applicants require a BSc with distinction in a field related to agricultural development or, alternatively, a BA in Social Sciences (or equivalent) with some background in agricultural sciences or rural development, from a high-quality institution. Applicants will need to provide evidence they possess sufficient language ability in the relevant European languages, along with a letter of motivation. Preference will be given to candidates with appropriate professional experience, who have been recommended by an academic or a professional body.

Website: http://www.agrismundus.eu

### Partners:

Montpellier SupAgro, Montpellier, France (Co-ordinating Institution)
University of Wageningen, Netherlands
University of Copenhagen, Faculty of life Sciences, Denmark
University College of Cork, Faculty of Food business, Ireland
University of Catania, Faculty of Agriculture, Italy
Technical University of Madrid, Escuela Tecnicà Superior de Ingenerios Agronomos, Spain

### Contact:

Didier Pillot
Montpellier SupAgro
BP 5098
1101, avenue Agropolis
34033 Montpellier Cedex 01, FRANCE
pillot@agrismundus.eu

# ALGANT International, integrated Master course in Algebra, Geometry and Number Theory

Duration: 2 years (including academic breaks)

#### Course description:

This two-year, international, integrated master course in Algebra, Geometry and Number Theory (ALGANT), was first selected as an Erasmus Mundus Masters Course in 2004. The teaching staff is very active in research and the students will profit from the many connections it entertains with research centres throughout the world.

Traditionally number theory used the methods of algebra and analysis to solve problems such as finding the number of integral of solutions of equations. In recent times geometric methods have been playing a more important role. Also, number theory has found important applications in areas such as cryptography, theoretical computer science, and numerical mathematics. The ALGANT course aims at introducing students to the latest developments of these fascinating subjects.

The consortium involves the universities of Bordeaux (France), Chennai (India), Leiden (The Netherlands), Milano (Italy), Montreal (Canada), Padova (Italy), Paris Sud (France) and Stellenbosch (South Africa), and it offers very good conditions of study. Classes will not exceed twenty students and professors have long office hours.

The ideal candidate must possess an academic degree from a program in mathematics lasting a minimum of three years (Bachelor). A thorough proficiency in English is required. In fact, every student of the ALGANT master will be offered the possibility to follow his entire curriculum in English. For each student a program will be tailored individually, but every student will have to go through at least two hosting institutions of the consortium.

The students having successfully completed the requirements of the ALGANT programme will be well armed to start a research-oriented career, preparing a doctorate or directly applying for a job in the many companies that are looking for the know-how we teach. They will be awarded a double degree, and/or a joint degree composed of two nationally recognised degrees issued by two consortium institutions, completed by a diploma supplement.

Website: http://www.ALGANT.eu

### Partners:

UNIVERSITY OF BORDEAUX 1, France (Co-ordinating institution) CHENNAI MATHEMATICAL INSTITUTE, India LEIDEN UNIVERSITY, Netherlands UNIVERSITY OF MILAN, Italy CONCORDIA UNIVERSITY, Canada UNIVERSITY OF PADUA, Italy UNIVERSITY OF PARIS-SOUTH 11, France STELLENBOSCH UNIVERSITY, South Africa

### Contact:

Prof. Boas EREZ
INSTITUT DE MATHÉMATIQUES DE BORDEAUX
Université Bordeaux 1
351, cours de la Libération
33405 TALENCE - France
boas.erez@math.u-bordeaux1.fr

# ASC Master of Science: Advanced Spectroscopy in Chemistry

**Duration:** 2 years

### Course description:

The "Advanced Spectroscopy in Chemistry" Masters course is a two-year (120 ECTS) programme within 7 European universities, providing students with state of the art spectroscopic techniques in a broad range of modern chemistry applications.

The ASC Master of Science diploma is delivered after completion of 90 ECTS (3 semesters) of courses and 30 ECTS of a Master thesis. Courses are taught in English at the seven partner universities. The network student population will be in the 60-70 brackets, with a student to teacher ratio of 2.0 or better. The ASC programme recruits students with a Eurobachelor in Chemistry, or holders of equivalent degrees, and a B2 prerequisite English level.

The selected students will study in at least 2 countries (minimum mandatory mobility: one semester):

- A 1st semester at Lille (FR) or Leipzig (DE), dedicated to provide all candidates with a common platform of core courses in advanced spectroscopic methods, including magnetic resonance, mass spectrometry, optical spectroscopy and diffraction techniques.
- A second semester at Lille (FR) or Leipzig (DE), where in addition to courses in spectroscopy, the ASC curriculum prepares students for specialisation courses and research projects to be carried out at a later date, in which spectroscopy will be the backbone.
- A 3rd semester mobility in any of the consortium institutions for specialization courses, where expansion is provided with applications in the following specialities:
  - Univ. of Bergen (NO): Spectroscopy of natural products.
  - Univ. of Bologna (IT): Quantum Chemistry, Catalysis.
  - o Univ. of Helsinki (FI): Spectroscopy of Environmental and Green Chemistry.
  - o Univ. of Krakow (PL): Optical Spectroscopy, Computational and Forensic Chemistry
  - Univ. Leipzig (DE): Bioorganic NMR, Protein Crystallography.
  - Univ. of Lille (FR): Solid State Spectroscopy NMR, X ray diffraction.
  - Univ. of Madrid (ES): Chemical sensors, ultrafast Lasers and femtochemistry.
- A 4th semester mobility in any of the consortium institutions upon student choice of a research topic towards the Master thesis, which will be strongly encouraged to be based on a collaborative project between two of the partner institutions.

A Summer school will be organised each year in the ASC Master programme, at the end of the first year, bringing ASC students in one location as a group.

The ASC Master aims to prepare students to become experts and develop international skills towards doctoral programs and/or professional activities in chemical analysis, characterization of the structures of materials, and measurements of fast phenomena. The joint/ multiple Masters of Science diploma in "Advanced Spectroscopy in Chemistry" is awarded by the seven universities of the consortium, with a joint Diploma Supplement.

Website: www.master-asc.org

### Partners:

University of Sciences and Technologies of Lille, France (Co-ordinating Institution)
Alma Mater Studiorum University of Bologna, Italy
University Complutense of Madrid, Spain
University of Leipzig, Germany
University of Bergen, Norway
University of Helsinki, Finland
Jagiellonian University of Krakow, Poland

### Contact:

Jean-Pierre Wignacourt
University of Sciences and Technologies of Lille
Bat C7, Avenue Mendeleïev
BP90108 59652 Villeneuve D'Ascq, France
jean-pierre.wignacourt@ensc-lille.fr

### ASTROMUNDUS Astrophysics

Duration: 1 year 10 months

### **Course description:**

Astrophysics (acronym: AstroMundus) is a two-year Erasmus Mundus Master Course in Astronomy and Astrophysics. This Course is based on the expertise of the Universities of Innsbruck, Padova, Roma, and Göttingen, and the University of Belgrade as a Third Country partner. The Master is closely related with institutions such as: Asiago Observatory, Istituto Nazionale di Astrofisica -Osservatorio Roma.

The main objectives of the Master are initiation in scientific research and applied training in Astronomy and Astrophysics. Emphasis is put on the application of modern techniques both in the observational and theoretical/computational domain. The various specialities of the partner institutions result in an increased offer of pathways for the students: Theoretical Astrophysics, Models, Simulations and Computation, as well as Observational Astrophysics based on data from the ground and from space and on the exploitation of modern data archives.

The programme lasts for two years (120 ECTS). During the first semester the students attend courses at the entrance university (University of Innsbruck). The second semester is spent at a second University of choice among the 2 Italian partner universities. The third semester is spent in one of the three partner institutions at Rome, Göttingen, or Belgrade depending on the astrophysical branches which the students will select to specialise on. Finally the fourth semester is mainly devoted to the Masters thesis (35 ECTS) that can be accomplished in any of the partner institutions. Students are given the possibility to attend additional advanced courses/seminars during the fourth semester, especially on topics related to their thesis work. The first semester is focused on basic learning in Astronomy and Astrophysics while the subsequent ones offer to the students the possibility to specialise in different branches.

Courses will be taught in English. Intensive tutoring of Master students will be assured during the whole course of their Master studies. Also, English will be the language of choice for tutoring and examinations. However, students will have access to language courses within each of the partner Universities. About forty students will be involved in the programme. Admission criteria include a Bachelor degree in physical sciences or an equivalent degree, and depend mainly on academic qualifications.

Students who successfully complete the requirements of the programme will be awarded a joint Master degree by the Consortium universities where they accomplished the various parts of their Master studies.

Website: http://www.astromundus.eu

### Partners:

UNIVERSITY OF INNSBRUCK, Austria (Co-ordinating institution) UNIVERSITY OF PADUA, Italy UNIVERSITY OF ROME "TOR VERGATA", Italy UNIVERSITY OF GÖTTINGEN GEORG AUGUST, Germany UNIVERSITY OF BELGRADE, Serbia

#### Contact:

Sabine Schindler University of Innsbruck Technikerstrasse 25 6020 INNSBRUCK - Austria sabine.schindler@uibk.ac.at

### **ATOSIM**

### Atomic Scale Modelling of Physical, Chemical and Bio-molecular Systems

Duration: 1 year

### Course description:

This one-year degree provides a high-level qualification in the rapidly expanding field of computer modelling in physical, chemical and bio-molecular sciences. This highly integrated Course covers a full range of techniques: from quantum mechanical atomistic descriptions to coarse-grained mesoscopic models. Particular fields of application include condensed matter and statistical physics, chemistry, physical chemistry, materials science and theoretical bio-molecular science.

The study programme is divided into three parts and operated jointly by the Ecole normale superieure of Lyon (ENS) (France), the University of Amsterdam (the Netherlands) and the University of Rome "La Sapienza" (Italy). During the first semester, the students are enrolled in a specialised curriculum in two of the three partner institutions. Next, they participate in a compulsory "winter school" for a fortnight, organised by the University of Amsterdam. Finally, they will carry out a research project between two partner institutions. The research project and the first semester courses involve mobility between two different institutions. Research projects are supervised jointly by tutors from two partner institutions. In addition, the programme involves a substantial proportion of "hands-on" practical courses in small groups.

The Course includes selected modules in physics, chemistry and sciences. It also includes a specialised programme in atomic and molecular modelling offered at ENS-Lyon in the Blaise Pascal Centre. In addition, there are a set of six tutorials taught by experts from a number of different European universities. Modules will be taught in English in Lyon and Amsterdam. In Rome, the modules will be given in Italian, however tutoring and examinations can be taken in English, and students will have access to language courses. Twenty to thirty students will be involved in the programme, with a professor/student ratio of almost one.

Students will obtain a double degree from the two institutions in which they are enrolled for their first trimester and for their research project. Admission into the master degree will be decided on the basis of academic excellence by a selection committee composed of representatives from each partner institution. Applicants should have at least four years of prior studies majoring in physics, chemistry, engineering, applied mathematics or bio-informatics. Proof of English proficiency will also be required.

Website: http://www.erasmusmundus-atosim.cecam.fr

### Partners:

Ecole Normale Superieure of Lyon, France (Co-ordinating Institution) Amsterdam University, Netherlands University of Rome "La Sapienza", Italy

### Contact:

Ralf Everaers / Samantha Barendson Ecole Normale Supérieure de Lyon 46, allée d'Italie 69007 Lyon - France Ralf.Everaers@ens-lyon.fr

### CEMACUBE Common European Master's course in Biomedical Engineering

Duration: 2 years

### Course description:

The Erasmus Mundus Master's course CEMACUBE (Common European MAster's CoUrse in Biomedical Engineering) will prepare students from Europe and outside Europe for professions in Biomedical Engineering.

Biomedical Engineering is a broad multidisciplinary area, involving many sub-specialisations, varying from regenerative medicine to implant design and from PET-scan imaging to biosensors. For a single university it is difficult to have enough knowledge of all sub-specialisations in Biomedical Engineering to teach their students on an adequate level. Also the required European scope is difficult to gain when students stick to a single university. Therefore a consortium of 6 universities has joined their knowledge and specific expertise into a 2-year European Master's in Biomedical Engineering: the Universities of Groningen (The Netherlands), Aachen (Germany), Dublin (Ireland), Ghent and Brussels (Belgium), Praque (Czech Republic).

Admission criteria are: a Bachelor in engineering and good knowledge of English (all teaching will be given in English), a convincing motivation letter and letters of reference. During the first year (semester 1 and 2), a student will follow lectures on all biomedical engineering subjects at one of the six universities. In the third semester (s)he will move to one of the participating universities to follow lectures on a specific topic, like medical imaging, tissue engineering or artificial organs. During the fourth and last semester, a Master's project will be performed on this specialisation at one of the 6 participating universities or at one of the 7 associated universities: ETH Zurich (Switzerland), Calabria (Italy), Aalborg (Denmark), Strathclyde (UK), Compiègne (France), Patras (Greece), Warsaw (Poland). Each student will receive a double degree.

Products that are manufactured and distributed by companies involved in Biomedical Engineering are meant for a specific, thus small group of patients. To have a sufficiently large market, they all have a European or global scope. This requires employees that are educated with a European scope. Institutes involved in research in Biomedical Engineering have to include many disciplines in their research teams to have progress, since Biomedical engineering covers such a large field of expertise, including many medical and technical specialisations. So they need employees that are educated in teamwork. Students that followed this European Master's course in Biomedical Engineering are trained with a Europan scope, experienced in intercultural and interdisciplinary teamwork, have a broad overview of the entire fied of Biomedical Engineering and are trained to specialise themselves in a specific field within Biomedical Engineering.

Website: www.biomedicaltechnology.eu

#### Partners:

UNIVERSITY OF GRONINGEN, Netherlands (Co-ordinating institution) FREE UNIVERSITY OF BRUSSELS (VUB), Belgium CZECH TECHNICAL UNIVERSITY PRAGUE, Czech Republic TRINITY COLLEGE DUBLIN, Ireland AACHEN UNIVERSITY, Germany GHENT UNIVERSITY, Belgium

### Contact:

Bart Verkerke
University of Groningen
Antonius Deusinglaan 1
9713 AV GRONINGEN - Netherlands
g.j.verkerke@med.umcg.nl

# CIMET Color in Informatics and MEdia Technology

**Duration:** 2 years

### Course description:

The Universities of Saint-Etienne (France, co-ordinator), Granada (Spain), Joensuu (Finland), and Gjøvik (Norway) are offering a two-years Masters Programme entitled Color in Informatics and MEdia Technology (CIMET).

The study programme of this Masters course is broadly interdisciplinary, encompassing photonics, computer vision and imaging science, computer science and multimedia technology as a mix of relevant theoretical and practical knowledge. The objective is to educate students in advanced methodologies and models in computational color science with two goals of research orientation and further studies at the doctoral level on one hand, and practical applications on the other hand. CIMET offers three areas of specialization: Color Imaging Science, Spectral Color Science and Multimedia Technology Science. These are emergent areas, rapidly evolving, and of growing impact on the Information Society Technologies which require specialized competencies.

The first semester is devoted to foundation courses necessary to students before beginning the two specializations they will follow. Foundation courses are proposed in any university of the consortium. The first specialisation, in the second semester, is devoted to compulsory courses in color imaging science necessary to students before beginning the second specialization. It will be done either in Granada or Saint Etienne. The second specialisation, in the third semester, will be done either in Joensuu or Gjøvik. Therefore, during the first three semesters, students will spend their Masters Courses in either two universities or three universities. This arrangement leaves open the possibility to visit during the Masters thesis period another university of the consortium which will not deliver a degree. During one of the first three semesters, students will have to follow courses on the culture and language of the visited country.

Courses will be taught in English and are structured according to the ECTS with 120 credits run over four semesters of full-time study. Students will be awarded a double (or multiple) degree, at postgraduate-level (Msc of Science, 300 ECTS), from the two (or three) degree-granting universities visited. The CIMET programme is intended for top level non-EU and EU students with a fluent knowledge in spoken and written English (TOEFL 550). Thirty students will be integrated each year in this program, with a professor/student ratio close to one. Admission will be based on academic excellence. Applicants should have a BSc degree (i.e. 180 ECTS) in the European LMD system, or equivalent, in computer science, physics or mathematics.

Website: http://www.master-erasmusmundus-color.eu/

#### Partners:

University Jean Monnet of Saint Etienne, France (Co-ordinating Institution) University of Joensuu, Finland Gjøvik University College, Norway University of Granada, Spain

### Contact:

Thomas Guillobez University Jean Monnet of Saint Etienne 21 rue Denis Papin 42023 Saint-Etienne Cedex 2, France thomas.guillobez@univ-st-etienne.fr

### CLE Master/Laurea Magistrale en Cultures Littéraires Européennes

**Duration:** 2 years

### Course description:

The Masters Course in European Literary Cultures aims at preparing European and International graduates for professions in which is requested the knowledge of: 1) at least three languages; 2) the different methodologies in at least three cultural fields as for example History of Literature, Texts Analysis, History, History of Art, History of Ideas.

The main objective of the Masters Course is to train a cultural operator / a researcher / a teacher to have a good range of methodologies and a high cultural appreciation of the different contexts of European culture which enable a comparison with other cultures. The main characteristic of this profile is the combination of the historical-linguistic skills, also at an advanced level, and a high knowledge of other disciplines. These profiles are characterized by the continual application of the linguistic and cultural skills within an analytical and critical perspective.

They also aim at overcoming the rigid nationalistic idea of literary cultures which have contributed to the creation of a European culture, with the aim of gaining a unitary vision of the common cultural heritage. European and international graduates shall be employed in the institutions or foundations aimed to the cultural promotion, both in Europe and Third countries: for example, museums, cultural council offices, embassy offices, Culture Institutes abroad.

The consortium offering this Masters programme is made up of the University of Bologna (Italy), the University of Haute-Alsace (Mulhouse-France), the University of Strasbourg (France) and the Aristotle University of Thessaloniki (Greece). Students will study in two or three different universities. The duration of the full-time programme is 24 months. At the end of the Masters Course, the consortium universities provide a double or multiple degree.

Students applying for the Masters Course CLE must have a good level first-cycle degree in a discipline of relevance to CLE, a recognised level of proficiency in English and in the language of instruction of the consortium institution chosen for the first Master year course.

The language of instruction varies according to the institutions chosen by the students. The programme involves around 120 students and offers 19 scholarships for Third Country students and 4 scholarships for Third Country scholars. Additional grants for inter-european mobility are also available for EU students.

The programme has four main learning units: European Literatures, Language-Methodologies and Linguistic Sciences, European History and Civilization and a Final research work.

Each Institution focuses on a specific subject: Towards a European Literature-Literary Tradition and Innovation (Bologna); European Spaces and Cultures-Contrasts and Interferences (Mulhouse); Oratories and Literary Configurations (Strasbourg) and Impact and Reception of Ancient Tradition (Thessaloniki).

Website: www.cle.unibo.it

### Partners:

University of Bologna, Italy (Co-ordinating institution) University of Strasbourg, France University of Haute-Alsace, France Aristotle University of Thessaloniki, Greece

### Contact:

Anna Soncini University of Bologna Via Cartoleria, 5 40124 Bologna, ITALY Tel. +39 051 2097125

e-mail address: soncini@lingue.unibo.it

# CoDe Joint European Master in Comparative Local Development

Duration: 1 year 6 months

### Course description:

This Masters Course focuses on how regional and municipal development ("local development") can support economic and social progress, as well as political and social stability. The Course educates and trains students through theoretical and practical learning on local development. It places particular emphasis on issues arising from ethnically complex situations, and provides direct contact with European best practice. Students will be able to introduce, support and coordinate transformation at the local level, acting as an interface between organisations and structures engaged locally.

Master CoDe is fully embedded in the "third wave" of local development. The focus of local development has shifted from direct intervention to shaping the entire context, including the institutional, social and business environment more conducive to stabilisation, business and growth. Thus the focus is placed on public/private partnerships, entrepreneurship, sustainability, competitiveness, networking and the leveraging of private sector investments for the public good. Tools used to this end include supporting quality of life improvements, supporting and encouraging networking and collaboration, providing a competitive local investment climate, encouraging workforce development and education, developing a holistic strategy aimed at growing local firms, fostering the development of business clusters.

The target students of the Programme are highly qualified young people, active in the promotion of local development and cohabitation in their countries.

This interdisciplinary and comparative study programme is comprised of lectures and laboratory activities in economics, law, political science, sociology and project cycle management, as well as workshops, internships, language courses, and project discussion groups. The Consortium provides considerable expertise on the subject.

Participating universities are the University of Trento (Italy), Corvinus University of Budapest (Hungary), the University of Ljubljana (Slovenia) and the University of Regensburg (Germany). The Course builds an institutional bridge between "old" and "new" European universities, local authorities, firms and other organisations in these countries. Prospective partners are the University of Belgrade (Serbia), the University of North Carolina at Chapel Hill (USA) and the Tshwane University of Technology (South Africa). The OECD LEED Trento Centre for Local Development is among the associate institutions.

Student mobility and teaching staff mobility are both integral to the Course. The students' mobility arrangements will include didactic activities at two partner universities, established on a rotation agreement. The second part of the mobility track treats students individually: each student, according to their knowledge base and interests, chooses at which partner university to pursue the rest of their Master's activities.

English is the general working language of the Programme. The programme offers language courses in Italian and German and, upon request, Hungarian and Slovenian. The core lecturers/students ratio is 1 professor to 3 students. Each student also has a personal supervisor for project work and one for their internship.

The partner universities award a joint Masters degree to successful students. The Course fosters strong ties with its alumni in order to guarantee continuous cooperation among them and with the consortium institutions and countries. Common admission criteria include a university degree in economics, law, political science, sociology or an equivalent qualification. Applicants must be competent in English and have good computer literacy.

#### Website:

http://www.unitn.it/mastercode/

#### Partners |

University of Trento, Italy (Co-ordinating Institution) Corvinus University of Budapest, Hungary University of Ljubljana, Slovenia University of Regensburg, Germany

### Contact:

Bruno Dallago Università degli Studi di Trento Via Inama 5 38100 Trento, ITALY bruno.dallago@unitn.it

### **COMEM**

### **Erasmus Mundus MSc: Coastal and Marine Engineering and Management**

**Duration: 2 years** 

### **Course description:**

CoMEM is a two-year Erasmus Mundus Masters Course in Coastal and Marine Engineering and Management, designed to train students within a broad curriculum that will allow them to contribute to solving challenges in the field of coastal and marine engineering and management. The language of the course is exclusively English. Students will study at three universities in three different European countries.

The consortium involves three polytechnic universities (Delft, Trondheim and Barcelona) and the UK universities of Southampton and London City. All partners have special facilities to support foreign students. The consortium has a well-established research and educational background including numerical simulations, physical model testing and field techniques. This expertise, together with long standing links with private firms, public administrations and other research/education institutes will also be offered to the students.

Candidates must possess an academic degree in Civil Engineering or an equivalent discipline, from an undergraduate programme lasting at least three years (Bachelor). A thorough proficiency in English is required.

The consortium offers a strong coastal and marine focus with either environmental/engineering, environmental/management or business/management emphasis. The first year (two semesters of each 30 ECTS courses and project work) is general to all students, providing academic and social coherence through a choice of compulsory and optional courses. Three main routes are offered in the first half of the second year (one semester of 30 ECTS courses and project work), and a finalizing semester at one of the three universities visited (MSc thesis work), resulting in nine different itineraries. As a result students will spend a maximum of one year at one university. Successful students will receive a multiple degree from each of the universities visited.

Website: www.comem.tudelft.nl

#### Partners:

Technical University of Delft, Netherlands (Co-ordinating institution) Technical University of Catalonia, Spain Norwegian University of Science and Technology, Norway City University London, UK University of Southampton, UK

### Contact:

Marcel Stive TECHNISCHE UNIVERSITEIT DELFT DEPARTMENT OF HYDRAULIC ENGINEERING Stevingweg 1 2628 CN – Delft, NETHERLANDS

### COSSE Computer Simulation For Science and Engineering

**Duration:** 2 years

### Course description:

Computational Science and Engineering (CSE) is a multidisciplinary field of great importance for high-tech industry and scientific/engineering research. The basis of CSE, i.e., mathematical modelling, numerical analysis, computer science and visualisation, provides the tools for computer simulation and virtual prototyping.

The objective of the COSSE programme is to establish a world-class educational Master programme in CSE which opens career paths in knowledge-based industries as well as academic research. The high-quality curriculum and stimulating study environment is enabled by the coordination of diversity and expertise of four high-ranking universities. COSSE is a two-year programme building on a high quality BSc or BEng degree with advanced level courses in mathematics, numerical methods, computer science and at least one applied course in e.g. fluid dynamics, electromagnetism, or biocomputing.

The students of COSSE will receive a double degree from two universities located in different countries. A student starts at the home university the first year taking courses corresponding to 60 ECTS credit points and then spends the second year at the host university taking specialization courses of 30 ECTS credit points and a Master Thesis project of 30 ECTS credit points supervised by both the home and the host university. At all universities of COSSE the Master Thesis project can be done at a research group or in cooperation with industry partners.

The specializations of COSSE and the degrees obtained are:

- KTH: Computational Biology, Computational Materials Science (Master of Science)
- TU Berlin: Computational Control Theory, Computational Optimization (Master of Science)
- TU Delft: Computational Fluid Dynamics, Numerical linear Algebra (Master of Science in Applied Mathematics)
- University Erlangen: Scientific Visualisation and Image Processing, High Performance Computing (Master of Science)

The programme is intended for a small number of highly qualified and motivated students. The student/staff ratio is around 4-5. The language of instruction is English. Admission Requirements: High quality Bachelor's degree in science or engineering; admission on competitive basis; good knowledge of English.

Website: http://www.kth.se/COSSE

#### Partners:

ROYAL INSTITUTE OF TECHNOLOGY, Sweden (Co-ordinating institution)
TECHNICAL UNIVERSITY BERLIN, Germany
DELFT UNIVERSITY OF TECHNOLOGY, Netherlands
FRIEDRICH ALEXANDER UNIVERSITY ERLANGEN-NURNBERG, Germany

#### Contact:

Michael Hanke Royal Institute of Technology Lindstedtsvägen 3 100 44 STOCKHOLM - Sweden hanke@csc.kth.se

### CSSM Complex Systems Science

**Duration:** 2 years

### **Course description:**

A "complex system" comprises many interacting components leading to multiple levels of collective structure and organization. Examples include natural systems ranging from bio-molecules and living cells to human social systems and the ecosphere, as well as sophisticated artificial systems such as the Internet, power grid or any large-scale distributed software system. It is a key challenge for our society to better understand, adapt, design and control such systems.

Our Masters degree teaches the tools to analyse complex systems and to understand their emergent behaviour. Students are offered a variety of research project opportunities to develop experience applying this to fresh challenges from the real world and within academic research.

We offer an exceptional cross-disciplinary environment and experience, with the programme based around three leading research centres in Complex Systems, associated with the Universities of Warwick (UK), Ecole Polytechnique (de Paris, France), and Chalmers/Gothenberg (Sweden). The European Complex Systems Society is an associated partner

The programme runs over two years (120 ECTS); it is half taught and half by research and leads to a JOINT Masters degree of University of Warwick, Ecole Polytechnique, Chalmers University (Gothenberg) and the University of Gothenberg. Students will be required to spend extended time in at least two centres and to join in events/collaborations across all three. Admissions are centralised (students must apply through Warwick, the Co-ordinating node) and successful candidates will start in September at the Centre whose initial teaching provides the best bridge between their undergraduate background and the programme as a whole. All students will have mobility opportunities after six months, and earlier for some well prepared students.

Instruction will generally be available in English, in which all students will be required to have some competance. Local language support will be available at the respective nodes to help students integrate. Each Centre has staff speaking a wide range of European languages and will allocate each student a mentor with some language in common.

Website: www.warwick.ac.uk/go/emmcs

#### Partners:

UNIVERSITY OF WARWICK, United Kingdom (Co-ordinating institution) ECOLE POLYTECHNIQUE, France CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden UNIVERSITY OF GOTHENBURG, Sweden

### Contact:

Robin Ball
CENTRE FOR COMPLEXITY SCIENCE
University of Warwick
CV4 7AL COVENTRY - United Kingdom
r.c.ball@warwick.ac.uk

### DILL International Master in Digital Library Learning

**Duration**: 1 year 8 months

### Course description:

DILL (International Master in Digital Library Learning) is a two-year Master Programme for information professionals who intend to work in the complex world of digital libraries. It is a cooperative project between Oslo University College (Norway), Tallinn University (Estonia) and Parma University (Italy).

### Learning objectives

- To develop knowledge and skills of digital librarianship through studying the cutting edge of digital library research as well as real world applications and best practices.
- To develop research skills through independent, yet supervised, research projects within the digital environment, applying relevant methods and analytical approaches.
- To understand the impact of digital environments on the role of information professionals in the knowledge society.

The students will acquire a joint Master degree (120 ECTS), recognised by all three partners. The Master Programme is intended for a group of maximum 30 students coming from European and third countries. The target groups include for example librarians, archivists, curators, administrators and technologists. The Master Programme will qualify for practical tasks, such as managing digital conversion programmes, implementing digital libraries as well as developing and implementing digital library educational programmes and doing research.

The first three terms consist of 6 modules, each amounting to 15 ECTS. In the last term the students write their Master Thesis amounting to 30 ECTS. DILL is delivered on campus, and the students will spend terms at each partner institution according the course structure below.

Year 1: 4 modules (60 ECTS)

- Digital Documents (Oslo)
- Research Methods and Theory of Science (Oslo)
- Information and Knowledge Management (Tallinn)
- Human Resource Management (Tallinn)

Year 2: 3 modules (60 ECTS)

- Access to Digital Libraries (Parma)
- Users and Usages of Digital Libraries: Quantitative and Qualitative Evaluation (Parma)
- Thesis (either of the partners).

Website: http://dill.hio.no

### Partners:

Oslo University College, Norway (Co-ordinating institution) Tallinn University, Estonia University of Parma, Italy

### Contact:

Ragnar Audunson HØGSKOLEN I OSLO FACULTY OF JOURNALISM, LIBRARY AND INFORMATION SCIENCE Postboks 4, St. Olavsplass 0130 Oslo, NORWAY Ragnar.Audunson@jbi.hio.no

### DMKM Data Mining & Knowledge Management

Duration: 1 year 11 months

### Course description:

The primary social and economic value of modern societies is knowledge. For this reason, mastery of Technologies able to extract dormant knowledge from information recorded in Datwarehouses or the Web, is indispensable for a sustainable development of both the individual and the society. Data Mining and Knowledge Management (DMKM) has become essential for improving the competitiveness of businesses and increasing access to knowledge. However, DMKM has still to face major scientific and technological challenges. The EMMC degree in DMKM offers specialist training in this field.

The Master in DMKM is based on experience in multi-site teaching gained from the Master degree in Knowledge Extraction from Data, which has been running since 1999 within three members of the consortium, and is taught by established scientists in the field.

The Master in DMKM is aimed at students from all over the world. Candidates must have a Bachelor degree (or equivalent) in Computer Science, Applied Mathematics or Statistics, as well as a good level of English (TOEFL 550 or equivalent). Admission is granted on the basis of a selection procedure. Classes are taught in English and the whole course is composed of 18 modules of about sixty hours each. The course runs over 4 semesters. The first semester is devoted to basic training, and includes mathematics, statistics, database technology, etc., whearas the two following ones are dedicated to acquire two specialities among six available ones: "E-Science", "Data Mining and Complex System Modeling and Application in Social Sciences", "Knowledge and Decision", "Statistical Modeling and Data Mining", "Semantic Web", "Relational Data Mining". The fourth semester is devoted to the elaboration of a dissertation thesis in either a laboratory or a company.

The network of partnership agreements set with leader laboratories and major companies where students may perform internships during the last semester will offer to holders of the EMMC degree in DMKM multiple employement opportunities in high-tech industry, business intelligence companies, banking & finance, or research and academic environments.

Language classes will also be provided to ensure that students integrate as well as possible in sociocultural environment of the host country. Each student must spend 6 to 12 months in at least two of the 4 countries. Students that have obtained 120 ECTS will automatically obtain national Master degrees from the countries in which they have studied. Students can benefit, on their site of residence, from support in the form of tutoring for each course. Tuition fees are 4,000 € per year for European students and 8,000 € per year for other students. Some scholarships will be available for students selected on their academical profile, their motivations and their personal project.

Website: www.em-dmkm.eu

### Partners:

UNIVERSITY LUMIÈRE LYON 2, FRANCE (Co-ordinating institution)
TECHNICAL UNIVERSITY OF CATALONIA – BARCELONA TECH, SPAIN
UNIVERSITY OF EASTERN PIEDMONT "AMEDEO AVOGADRO", ITALY
UNIVERSITY "POLITEHNICA" OF BUCHAREST, ROMANIA
UNIVERSITY PIERRE ET MARIE CURIE-PARIS 6, FRANCE
POLYTECH'NANTES, POLYTECHNIC GRADUATE SCHOOL OF NANTES UNIVERSITY, FRANCE

#### Contact:

Abdelkader Zighed
DEPARTEMENT D'INFORMATIQUE ET STATISTIQUE
FACULTÉ DE SCIENCES ECONOMIQUES ET DE GESTION
Laboratoire ERIC, Campus Porte des Alpes,
5 av. Pierre Mendès-France
69676 BRON - France
abdelkader.zighed@univ-lyon2.fr

### ECOHYD Erasmus Mundus Master of Science in Ecohydrology

**Duration:** 2 years

### Course description:

Throughout the world estuaries and coastal waters have experienced environmental degradation. Present remedial measures based on engineering and technological fix have been unable to restore the ecological processes and reinstate the full beneficial functions and services of degraded aquatic ecosystems. This Master course will provide to students a profound knowledge and understanding of the ecological processes that support the resilience of aquatic ecosystems, and how these processes can be harmonized with engineering infrastructures at the river basin and used to sustain aquatic ecosystems quality and revert degradation.

The ERASMUS MUNDUS MASTER OF SCIENCE IN ECOHYDROLOGY (ECOHYD) gathers the expertise from a consortium constituted to include complementary expertises from four European HEI (Portugal, Poland, Netherlands and Germany) and one third-country university (Argentina). Expertise on estuarine and coastal ecosystems ecohydrology will be provided by the University of Algarve (Portugal); expertise in freshwater and urban ecohydrology will be provided by the University of Lodz (Poland); and the engineering and management components will be provided by UNESCO-IHE (Netherlands) and University of Kiel (Germany). The course will have a duration of 2 years and will be provided in English. The Course will start with two cohorts of 15 students, at the University of Algarve and at the University of Lodz. This first part of the Master Programme will count as 50 ECTS. Students will spend a second mobility period at the University of La Plata or the Institute of Oceanography and Fisheries (Croatia), where students will understand and evaluate the geographical and climatic differences needed to consider in the development of Ecohydrology solutions. This component of the formation counts as 10 ECTS. Then students will carry out a third mobility period at the University of Kiel or IHE Delft to acquire competences in aquatic management and aquatic engineering. This component counts as 30 ECTS. Course will be completed with the realization of a Master Thesis, representing 30 ECTS that students develop in chosen European HEI of the consortium. Students with positive evaluation after completion of all requirements will be granted a multiple degree by the Consortium Institutions.

Website: http://www.ecohyd.org

### Partners:

UNIVERSITY OF THE ALGARVE, Portugal (Co-ordinating institution) UNIVERSITY OF LODZ, Poland CHRISTIAN ALBRECHT UNIVERSITY KIEL, Germany UNESCO-IHE INSTITUTE FOR WATER EDUCATION, Netherlands NATIONAL UNIVERSITY OF LA PLATA, Argentina

### Contact:

Luis Chícharo University of the Algarve Mobility office Campus de Gambelas 8005-139 FARO - Portugal Ichichar@ualg.pt

### EEM - Nano Erasmus Mundus Master in Nanoscience and Nanotechnology

**Duration:** 1 year 8 months

### Course description:

This two year, 120 ECTS Master's Course provides a top quality and broad multidisciplinary education in the emerging field of nanoscience and nanotechnology, coupled with an individual top-level specialization in one of five defined areas of nanoscience and nanotechnology: nanophysics, nanochemistry, nanoelectronics, biophysics or nanobiotechnology. The Course is organized by the Katholieke Universiteit Leuven (Belgium), Chalmers Tekniska Högskola, Göteborg (Sweden), Technische Universität Dresden (Germany) and the Joseph Fourier Université de Grenoble (France). The course aims to instil in its students the power to work, communicate and think across the boundaries of traditional scientific disciplines.

The course is organized with the support of three associated partners: IMEC in Leuven (Belgium), CEA-LETI in Grenoble (France) and Leibniz Institute for Solid State Materials Research in Dresden (Germany). These institutes are providing access to world class infrastructure for Nanotechnology research and development and opportunities for graduating students to continue their study with a PhD.

The consortium offers a highly integrated programme, based on a jointly developed curriculum and composed of course modules that are fully recognized by all consortium partners. All students start the first year at the KU Leuven, where they follow a set of introductory courses to give them a common starting basis, a compulsory common block of core courses to give them the necessary multidisciplinary background of Nanoscience and nanotechnology, a selection of courses to provide some non-technical skills, and already a profiling block of elective courses, which prepares them for their second year specialisation. In the second year university the students select their specialization area (Nanophysics, Nanochemistry, Nanoelectronics, Biophysics or Bionanotechnology) and follow a compulsory set of specializing courses (15 ECTS), combined with a set of elective broadening courses (15 ECTS), and do their master thesis research project (30 ECTS). Since the Master's course has a strong link with many research groups, the professor/student ratio is very high (more than one professor to every five students).

The language of instruction is English. The Course leads to a joint degree from the two universities at which the student has studied (except for the case of Chalmers where a double degree is given). Application requirements include the completion of a Bachelor's degree in Physics, Chemistry, Biochemistry, Electrical Engineering or Materials Science with a proven background in mathematics and physics or chemistry. English language proficiency is also a requirement.

Graduate students from the EMM-nano program will be well prepared for both continued research in nanoscience for a PhD degree, and a non- academic career in the rapidly emerging nanotechnology industry. The EMM-nano graduates will also be part of the important and challenging task in the coming decades of bringing today's nanoscience into tomorrow's nanotechnology.

Website: www.emm-nano.org

### Partners:

CATHOLIC UNIVERSITY OF LEUVEN, Belgium (Co-ordinating institution) UNIVERSITY OF GRENOBLE 1 JOSEPH FOURIER, France TECHNICAL UNIVERSITY OF DRESDEN, Germany CHALMERS UNIVERSITY OF TECHNOLOGY, Sweden

### Contact:

Mr. Guido Groeseneken Catholic University of Leuven Kapeldreef 75 3001 LEUVEN - Belgium nano@kuleuven.be

### EM-ABG European Master in Animal Breeding and Genetics

**Duration:** 2 years

### Course description:

The European Master in Animal Breeding and Genetics course (EM-ABG) is a response to the need for highly qualified graduates operating internationally in the knowledge-intensive area of farm animal breeding and genetics. The focus of EM-ABG is on the development of sustainable breeding programmes for farm animals, fish and companion animals.

EM-ABG aims at building capacities in the fields of animal breeding and genetics to meet the following challenges in developed and developing countries:

- increase of livestock and fish production, while preserving the quality of the products and the welfare of animals:
- preservation of natural resources, especially biodiversity, which become scarcer and scarcer;
- development of sustainable animal breeding programmes that contribute to improved livelihood of farmers and efficient food chains;
- development of sustainable breeding programmes that contribute to the improved health and welfare of companion animals (including populations in zoos and nature reserves).

The EM-ABG graduate will be trained to formulate and provide effective and appropriate responses to these challenges. The language of instruction is English except at AgroParisTech where French will also be used in the first year, and Christian-Albrechts-University where German will also be used in the first year.

EM-ABG starts with an orientation period for all students in Wageningen. The Course will consist of obligatory and optional studies: Introductory Subjects, Problem Oriented Subjects, and Thesis. Students will conduct the major part of their training at two universities of the consortium. The duration of the stay at one university is 12 months. Successful students are awarded two nationally recognized masters degrees (double degree).

EM-ABG is open to well motivated students who have completed BSc or equivalent degree in animal science or related fields and good knowledge in English, both orally and written. Applicants are asked to explain their goals and interests in coming to Europe.

Website: http://www.emabg.eu

#### Partners:

University of Wageningen, Netherlands (Co-ordinating institution)
BOKU – University of Natural Resources and Applied Life Sciences, Austria
Christian-Albrechts-University of Kiel, Germany
Paris Institute of Technology for Life, Food and Environmental sciences – Agro Paris Tech, France
Norwegian University of Life Sciences, Norway
Swedish University of Agricultural Sciences, Sweden

### Contact:

Johan Van Arendonk Department Animal Sciences Wageningen University Post Box 338 6700 AH Wageningen, Netherlands

### EMAE European Master in Applied Ecology

**Duration:** 2 years

### Course description:

Environmental protection is certainly the greatest current challenge to mankind as it plays a crucial role in economic and societal development throughout the world. By cleaving to this challenge, we will be able to generate sustainable development within human societies. The understanding of direct and indirect effects of global change on biodiversity will be crucial for management and conservation of natural environments. Over the last decades, the analyses carried out by ecologists have revealed the great fragility of natural balances and the dramatic ecological consequences of unwise human activities.

The European Master in Applied Ecology (EMAE) plans to form specialists able to develop and lead ecological projects throughout the world by providing them with a wide range of competences and skills, completed by a professional specialization in one of several leading fields of Ecology (Conservation, Toxicology, Functional ecosystem dynamics, Evolutionary ecology, Environmental sciences).

The EMAE Masters Course is an integrated programme designed by 4 Universities with a wide-range leadership in Ecology: Université de Poitiers, France (Co-ordinating institution); Christian Albrechts Universität in Kiel, Germany; Universidade de Coimbra, Portugal and University of East Anglia in Norwich, UK. Our research activities as well our international relationships and experiences clearly demonstrate complementarities and robustness of our competences as a whole.

In September of the first year, students are welcomed in Poitiers where intensive language training (in French, German or Portuguese) is provided. During the first year, basic knowledge and skills are acquired in both Poitiers (September to December) and Norwich (January to March) in the main fields of Ecology, from a functional approach of ecosystems to the ecological consequences of global change. Elective field training completes the programme either in Coimbra or Kiel (April to July). The teaching language is mainly English.

The second year corresponds to the elective specialization hosted by one of the EMAE institutions in the following areas:

- Applied and Theoretical approaches in animal ecology and population biology, Poitiers
- Advanced studies on dynamics and function of terrestrial and aquatic ecosystems, Kiel
- Environmental quality & Ecotoxicology, Coimbra
- Environmental sciences & Conservation, Norwich.

The Master's project is co-supervised and a part can be carried out in overseas partner institution using our worldwide collaborative network in South and North America, Asia, Australia or Europe.

The programme ends by the defence of Master Thesis in the hosting institution. Then, students are awarded in Poitiers in September in a farewell congress during which they present again their project to fellows and new incoming EMAE students. The completion of the cursus is rewarded by multiple Master degrees detailing individual curriculum in a Diploma Supplement.

Website: http://www.master-emae.org

### Partners:

University of Poitiers, France (Co-ordinating institution) Christian Albrechts University in Kiel, Germany University of Coimbra, Portugal University of East Anglia in Norwich, United Kingdom

### Contact:

Yves Caubet Université de Poitiers, UFR SFA Dpt Biologie, Organismes, Populations – UMR CNRS 6556 40, Avenue du Recteur Pineau 86022 Poitiers Cedex, France yves.caubet@univ-poitiers.fr

# EMARO European Master in Advanced Robotics

**Duration:** 2 years

## Course description:

The Masters is designed to promote high-quality educational offer in the area of advanced and intelligent robotics. After graduation the students will have mastered the different areas of robotics (Mathematical Modeling, Control Engineering, Computer Engineering, Mechanical Design) in order to be able to deal with Robotics Systems as a whole rather than just to concentrate on one particular area. The career prospects for EMARO graduates are very good as the proposed courses are relevant to today's high technology society. Students may take the Master as a professional terminal degree, or to join PhD programmes afterwards.

## Duration and mobility:

The programme of study lasts two academic years (120 ECTS) split into four equally loaded semesters. The student has to spend the first two semesters in one institution and the second two semesters in another institution.

### Summary of study programme:

The language of instruction is English, but local language and culture courses of the hosting countries are included in the programme of study. The programme of the first two semesters is the same in the consortium institutions, it provides the students with a solid interdisciplinary background across the main areas of robotics (Cognition, Action, Perception). During the third semester, more specialised courses are proposed. The programme of this semester is based on the specific research strengths of the partners institutions (thus varying from partner to partner). It contains courses on Research Methodology, Advanced Control and Modeling, Humanoid Robots, Biologically Inspired Robots, Motion Synthesis, Service Robotics.

### Degrees awarded:

Students that graduate from the EMARO Masters course will obtain two Masters degrees from the institutions where they studied. The degrees are officially recognised and give full access to PhD study programmes. The Consortium will deliver a diploma supplement describing the nature, level, context, and content of the studies that were successfully completed by the student.

#### Admission requirements:

The Masters course applies to European and third country-students who already hold a first university degree after at least three years of university studies, with 180 ECTS, in a field related to Robotics area such as: Mechatronics, Automatic Control, Computer Science, Electrical Engineering, Mechanical Engineering, and Applied Mathematics. The applicants have to be fluent in writing and reading in English. Admission is decided on the basis of excellence of the academic records of the student, the quality of her/his former studies, motivations, reference letters and general skills for foreign languages. The EMARO Consortium recruits about 45 students each year, about 15 in each institution. The professor/student ratio is about 1:2.

Website: http://emaro.irccyn.ec-nantes.fr

#### Partners:

Central School of Nantes, France (Co-ordinating institution) Warsaw University of Technology, Poland University of Genova, Italy

#### Contact:

Wisama Khalil Ecole Centrale de Nantes 1 Rue de La Noë BP 92101 44321 Nantes Cedex 3, France wisama.khalil@irccyn.ec-nantes.fr

### **EMBC**

# **Erasmus Mundus Master of Science in Marine Biodiversity and Conservation**

**Duration: 2 years** 

## **Course description:**

The Erasmus Mundus master of Science in Marine Biodiversity and Conservation (EMBC) is offered by a University consortium consisting of six partners: Ghent University (Belgium), University of Bremen (Germany), University of Pierre et Marie Curie - Paris 6 (France), University of the Algarve (Portugal), University of Oviedo (Spain) and University of Klaipèda (Lithuania).

The study programme is divided in 3 thematic modules:

- (1) Understanding the structure and function of marine biodiversity deals with the fundamental aspects of Oceanography, the structure and functioning of Marine Biodiversity (from genes to habitats) and with Impact studies (at least 24 ECTS).
- (2) Toolbox for investigating marine biodiversity provides an advanced training in Statistics and experimental design, Modelling, Taxonomy, Data and Information Management, Field observations and interpretation and Molecular methods (at least 20 ECTS).
- (3) Conservation and Restoration of marine biodiversity deals with the application of the above mentioned theories and methods in order to develop a sustainable use of the marine environment (at least 10 ECTS).

The programme (2 years or 120 ECTS) is complemented with summer schools operating within the EU-Network of Excellence MarBEF. A research project (Master thesis) of 30 ECTS is presented within the field of one of the three thematic areas. Transferable skills (including training in native languages, scientific communication, research management) is provided as well. Elective courses count for 20 ECTS.

Student mobility is an integral part of the Master. 50 students (25 third country students and 25 European students) start in one of the three group I Universities (Gent, Bremen or Algarve) for 2 semesters; for the third semester, students move to one of the group II Universities (Paris, Oviedo or Klaipèda). The research project for the thesis work can be performed in one of the partner institutions.

The language of instruction is English. During the study period, the 'survival' languages (Dutch, German, Portuguese, French, Spanish or Lithuanian) can be studied as well.

The course is open to students with at least a bachelor (or Master) degree in biology, ecology, environmental sciences, oceanography, marine sciences, geography, geology, or other equivalent degrees with minimum 180 credits.

Website: http://embc.marbef.org

#### Partners:

Ghent University, Belgium (Co-ordinating Institution) University Pierre et Marie Curie - Paris 6, France University of Oviedo, Spain Klaipèda University, Lithuania University of Bremen, Germany University of the Algarve, Portugal

### Contact:

Magda Vincx Ghent University Krijgslaan 281, building S8 9000 Gent, BELGIUM magda.vincx@ugent.be

# EMCL European Masters in Clinical Linguistics

**Duration:** 2 years

## **Course description:**

The EMCL is a 24-month full-time interdisciplinary and transnational university programme at the Masters level providing integrated training in theoretical and experimental neurosciences and psycholinguistics with clinical issues. The aim of the Masters programme is to train highly qualified advanced students who are excellently prepared for research work and PhD-programmes in the above fields.

The transnational consortium comprises three universities: Groningen (NL), Joensuu (FI) and Potsdam (DE). The programme consists of three teaching semesters and a fourth semester to do an internship and write the Masters thesis. Students will all start in Potsdam in the first month of the programme (Sept. 1-30) to organize practical arrangements and participate in intensive work-up courses on linguistics, methodology and clinical aphasiology. The rest of the first semester (Oct.1-March 1) will be spent either in Groningen or Joensuu, where two research courses in addition to a language course will be obligatory. All students spend the second term in Potsdam. The first part (March 1-April 15) concentrates on language, clinical neurology and therapy, the second part (April 15-July 15) offers two obligatory research classes. During the semester interval also spent in Potsdam (July 15-Sept. 1), students prepare their thesis exposé in combination with a course on scientific writing and they prepare their internship. During the third term, three obligatory research classes are offered in Groningen and Joensuu. At the beginning of this term, students attend an international conference and workshops organised for the consortium students. To finish the programme, the fourth term is spent at the institution of the thesis supervisor and includes an internship as well as the actual thesis work.

The total number of credits required for completing the programme is 120 ECTS. All courses are taught in English. Students obtain a joint consortium degree recognized in all countries of the consortium partners. The programme recruits students worldwide. The requirement for admission is at least three years of higher education (BA, BSc or equivalent) with an emphasis on speech and language pathology, linguistics, biomedical sciences, psychology or special education.

Website: www.emcl-mundus.com

## Partners:

UNIVERSITY OF POTSDAM, Germany (Coordnating institution) UNIVERSITY OF GRONINGEN, Netherlands JOENSUU UNIVERSITY, Finland

#### Contact:

Ria De Bleser Faculty of Human Sciences University of Potsdam Karl-Liebknechtstr.24, Haus 14/Zimmer 2.13 14476 GOLM - Germany debleser@ling.uni-postdam.de

# EMCSE European Masters Course in Software Engineering

Duration: 2 years

## Course description:

Software Engineering (SE) is one of the fields of the Computing (or Computer Science – CS) which deals with the establishment and use of sound engineering principles (methods) in order to obtain economically software that is reliable and works on real machines.

The objective of the "European Masters Course in Software Engineering" (EMSE) is to train software engineers that meet the requirements of international software practice today, offering them an inter-European study programme based on the coordination of the strengths of each of the partner institutions.

The EMSE consortium was set up by universities and professors excelling in the SE area, which places the EMSE in an unbeatable position for contributing to European competitiveness and excellence in the SE field.

The EMSE surpasses existing SE postgraduate educational offers in different ways. From a strategic point of view:

- Enabling students to train in SE with some of the most outstanding European researchers.
- Enabling students to get a broad view of software development in different European countries (note that the EMSE consortium is composed of countries from northern and southern Europe with a view to encouraging the integration of and acquaintance with their different cultures).

From a tactical point of view:

- Providing students with broader educational opportunities than are offered by national masters programmes in the field.
- Allowing students to gather expertise on different working strategies, providing them with two tutors from two different institutions of the consortium.
- Defining a coordinated SE programme accepted by all partners of the consortium that will contribute to defining a "de facto" standard for graduate SE education in Europe, as well to shape SE as a discipline on its own.

The EMSE will provide students with a thorough education comprising both theoretical and practical knowledge that will enable them to tackle and develop software solutions to many problems that they will come up against in their professional career. Studying at least two universities in Europe (with English as the language of instruction, accompanying language classes in another European language) in multi-national groups will contribute to the student's preparation for the increasing globalisation of software commerce and industry. The course also prepares the students for follow-up PhD studies provided by the participating partners and others.

Website: http://www.fi.upm.es/emse

### Partners:

Technical University of Madrid, Spain (Co-ordinating institution) Techical University of Kaiserslautern, Germany Free University of Bolzano, Italy Blekinge Institute of Technology, Sweden

#### Contact:

Natalia Juristo
UNIVERSIDAD POLITÉCNICA DE MADRID SCHOOL OF COMPUTING
Campus de Montegancedo
28660 Madrid, SPAIN
natalia@fi.upm.es; odieste@fi.upm.es

# EMDC European Master in Distributed Computing

Duration: 1 year 10 months

## Course description:

Information technology is becoming ubiquitous and increasingly important for all kinds of organizations, including enterprises, factories, public utilities, state bodies, health care, banking, transportation, airport and harbour control, etc. Information technology, and distributed computing in particular, is required to successfully undertake and manage large-scale projects on such organizations. Furthermore, distributed computing provides the foundations to manage the communications and data processing required by other science fields such as health sciences, biology, physics, chemistry, mechanical and civil engineering.

The European Master in Distributed Computing is a two-year degree comprising three lecture semesters and one semester for thesis work. The first year of studies is carried out at two optional entry locations (IST and UPC), each receiving about half of the enrolled students. The third semester of studies will be carried out at KTH by the totality of enrolled students. Students will then prepare their master thesis, approximately one third of them performing research at each participant institution. This programme structure ensures that students will attend courses at least in two different institutions, possibly a third if thesis work is performed in other than the institution of entry.

The first year of studies achieves integration of courses between IST and UPC in solid distributed computing fundamentals background, while allowing a significant degree of specialization in more advanced courses, tailored for different student profiles and principal faculty expertise of each institution. This is accomplished by a set of core courses addressing fundamental subjects on middleware, security, parallel and distributed computing, and peer-to-peer systems.

The specific profiles offered at IST and UPC address two different sets of concerns in design, development, evaluation, and evolution of distributed computing systems: overall system reliability at IST (fault-tolerance, interoperability, autonomic systems) and performance at UPC (performance measurement, tuning, numerical simulation). Issues of system availability and scalability are relevant for both approaches, while problem tackling philosophy and advanced theoretical concepts employed are diverse. This enables offers students at each site with different sets of advanced skills and interacting with different families of the systems research community.

The third semester of studies at KTH receives all students, providing them with common advanced courses that assume and leverage course integration of previous semesters. This motivates students to develop large-scale projects integrating both common and complementary skills acquired earlier, and developing research methodology and scientific writing, essential to pursue further studies and research.

Website: www.kth.se/emdc

#### Partners:

Royal Institute of Technology - KTH, Sweden (Co-ordinating institution) Instituto Superior Técnico – IST, Portugal Universitat Politècnica de Catalunya - UPC, Spain

### Contact:

Johan Montelius KTH ICT Forum 105 164 40 KISTA - Sweden johanmon@kth.se

# EMDIREB European Master in Diagnosis and Repair of Buildings

**Duration:** 1 year 6 months

## Course description:

The European Master of Diagnosis and Repair of Buildings (EMDiReB) is a one-year-and-a-half masters course (90 ECTS in three semesters of 30 ECTS each), focused on diagnosis, repair, rehabilitation and improvement of buildings and urban spaces.

The training offered has the following objectives:

- To provide solid core training for specialists. This will prepare them to undertake the diagnosis, repair, rehabilitation and improvement of buildings and urban spaces.
- To provide integral training to enable specialists to write reports and projects, technically supervise construction work and carry out executive management activities associated with the processes involved.
- -To provide more advanced training, drawing together into one single training offer the knowledge and experience accumulated by three European universities in such important fields as building diagnosis and repair. The consortium contributes and enriches the programme with three different areas of specialization associated with complementary aspects of architectural activity.

The programme is divided into three main parts:

The Core Section (60 ECTS) contains the basic input of theory and practical knowledge: building damage analysis, diagnosis and repair within the framework of the architectural solutions most widely accepted in recent decades. It comprises two Modules: Building and Urbanization Damage Assessment and Building and Urbanization Repair Systems and Procedures.

Specialization Section (20 ECTS), in order to acquire more advanced training, to be chosen between:

Spain: Conservation and Optimization of Energy Performance in Buildings

Italy: Conservation and Restoration of Cultural Heritage

Poland: Urban Preservation and Renewal

The student will finish the programme with and End-Of-Course Project (10 ECTS), designing a complete Repair Project, that will also reflect the specialization studied by the student.

The languages to be used in teaching and examination activities are local languages for Core Section (Spanish, Italian and Polish), and English for Specialization and End-Of-Course Project.

All successful students will receive a double or multiple degree, depending on the number of universities they study at: two different universities (double) or the three universities of the consortium (multiple).

Website: www.emdireb.eu

### Partners:

University of Seville, Spain (Co-ordinating Institution) University of Calabria, Italy Politechnical Lubelska, Poland

#### Contact:

Ricardo Huete Fuertes University of Seville Avda. Reina Mercedes, 2 41012 Sevilla - SPAIN info@emdireb.eu

# **EMECS European Master Embedded Computing Systems**

Duration: 2 years

# Course description:

An embedded computing system, or simply "embedded system", is a highly complex, special-purpose computer-controlled system. The core of such a system is a microprocessor or microcontroller programmed to perform application-specific tasks. For example, dozens of processors are embedded in modern automobiles and communicate through sophisticated communication structures. Other typical examples of embedded computing systems are cell phones or the control systems in manfacturing. Embedded systems are of strategic importance to Europe's economy since a competitive advantage arises from Europe's traditional strength in deployment areas of embedded computing such as automotive systems and telecommunication.

The European Master's Course in Embedded Computing Systems (EMECS) is designed to educate Bachelor graduates from Electrical & Computer Engineering and Computer Science as well as graduates from related disciplines to become experts in the field of Embedded Computing Systems.

The participating institutions are:

- University of Kaiserslautern (Germany)
- Norwegian University of Science and Technology (Norway)
- University of Southampton (United Kingdom)

EMECS is a two-years Master's Course (120 ECTS credits) that can be pursued at any two of the participating institutions. Students will earn 50% of the credits at each institution leading to a joint degree from the respective institutions. The language of instruction is English.

Students participating in this programme will be trained in three major areas:

- hardware architectures of embedded systems
- system-on-chip design
- system software

These areas constitute the "Core Programme" of EMECS and will be taught during the first year of study at each institution. Completion of the core programme (45 ECTS credits) will ensure the mobility of the students after the first year of study.

The "Elective Programme" (45 ECTS credits) provides training in specialized topics of embedded system design and provides the background in typical application areas like communication systems, automation & control and microsystems. The elective programme reflects the individual strengths of the participating institutions. The course is completed with a Masters Thesis (30 ECTS credits) which typically contributes to a larger project conducted jointly with industry.

Website: http://mundus.eit.uni-kl.de

### Partners:

UNIVERSITY OF KAISERSLAUTERN, Germany (Co-ordinating institution) UNIVERSITY OF SOUTHAMPTON, United Kingdom NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, Norway

### Contact:

Wolfgang Kunz University of Kaiserslautern Gottlieb Daimler Strasse 47 67663 KAISERSLAUTERN - Germany kunz@eit.uni-kl.de

#### **EMELE**

# Multiculturalism: Master degree in Learning and Teaching of Spanish in Multilingual and International Contexts

Duration: 2 years

## Course description:

This Master's program forms teachers of Spanish as L2 trained within the new paradigmatic framework brought about by the application of the TUNING program to the field, as reflected in the Common European Frame for Language Teaching and Evaluation. It produces professionals who focus on learning processes, contribute to autonomous, meaningful and lasting language acquisition and who are aware of the learners' cultural, social and linguistic diversity. L2 teachers act in multilingual, often international, contexts and must therefore be skilled at facing sociolinguistic and psycholinguistic factors displaying complex interactions.

This Master is a joint curriculum program developed by the University of Barcelona and Pompeu Fabra, Free University of Berlin, University of Deusto, Groningen University, University of Iceland and Stockholm University. This network is complemented by third country partner institutions such as the University of Osaka (Japan), State University of Campinas (Brazil), Moscow State University of Linguistics (Russia), University of Maryland (USA) and Jawaharlal Nehru University (India).

The Master comprises 120 ECTS credits organized around four semesters of 30 ECTS credits each. These include methodological and descriptive modules as well as practical training and research. The first year training takes place in Spain, University of Deusto (1st semester) and University of Barcelona/Pompeu Fabra (2nd semester). The second year focuses on the multilingual and international aspects L2 teaching, with a teaching internship, introduction to L2 teaching/learning research and the elaboration of final program reports or research projects. Third-country students spend the full second year at any of the non-Spanish European universities of the network, where they develop first-hand experience with specific local L2 teaching/learning conditions. Each university possesses a distinct area of expertise within the field. The second year for European students is spent in two different institutions. In the 3rd semesters, students receive in-situ training and carry out their teaching internship in one of the non-EU third-country institutions. In the final semester, European students return to one of the non-Spanish European universities of the network. This arrangement guarantees a maximally different and diverse exposure to L2 teaching and learning realities for both student groups.

The final semester offers two different paths: a 'professionalizing' itinerary for students primarily interested in teaching activities and a research orientation which can lead to an academic Ph.D. itinerary. Candidate students are expected to have a B2-C1 level of proficiency in Spanish and in English. Degrees are jointly awarded by the participating EU institutions. Where this option is unavailable, independent degrees are awarded.

Website: www.emele.deusto.es

#### Partners:

UNIVERSITY OF DEUSTO, Spain (Co-ordinating institution)
UNIVERSITY OF BARCELONA, Spain
POMPEU FABRA UNIVERSITY, Spain
FREE UNIVERSITY BERLIN, Germany
UNIVERSITY OF GRONINGEN, Netherlands
UNIVERSITY OF ICELAND, Iceland
UNIVERSITY OF STOCKHOLM, Sweden
UNIVERSITY OF OSAKA, Japan
JAWAHARLAL NEHRU UNIVERSITY, India
UNIVERSITY OF CAMPINAS, Brazil
UNIVERSITY OF MARYLAND, United States
MOSCOW STATE LINGUISTIC UNIVERSITY, Russian Federation

#### Contact:

Jon Ortiz De Urbina University of Deusto Avenida de las Universidades 24 48007 BILBAO - Spain urbina@fil.deusto.es

# **EMGS Global Studies - A European Perspective**

Duration: 1 year 8 months

## Course description:

During the last two decades of the 20th century transnational intertwining increased as the significance of global problems rapidly gained importance. This process is commonly termed 'globalisation'. As a result of an increasing lack of balance with regard to the prospects of independent action, social, political and cultural strategies altered dramatically. These strategies have given rise to a discussion concerning the most suitable paradigms with which to analyse global processes. The M.A. in Global Studies is not restricted to a single method of interpretation but is designed to equip highly-qualified students with the ability to contribute to this forward-looking debate, an essential qualification for enhancing one's prospects in the contemporary labour market. The programme, despite its various approaches their necessary combinations, takes global connections as a starting point for the understanding of globalisation. It views globalisation as follows:

- 1. Globalisation is not only a phenomenon of past centuries but requires a greater historical perspective.
- 2. It cannot be merely reduced to economic processes and social consequences but must also investigate the approval and disapproval of political and cultural developments.
- 3. It cannot only be analysed as a global process of homogenisation but also from the perspective of Regional and Area Studies.
- 4. It is also subject to interpretation, perspective and intellectual environment.

The programme aims at qualifying students to deal responsibly and on an advanced scientific level with phenomena of globalisation and its accompanying processes in countries of the North and the South on the basis of findings, theories and methods from the Humanities and Social Science, History and Cultural Science.

Depending on the individual mobility track it is possible to specialise in particular areas of globalisation research e.g. historical as well as comparative analysis of global entanglements, methods of global history, economic and social history of globalisation, global political economy, global governance, analysis of transformation processes in Central and Eastern Europe and development studies.

Upon successful completion of this researched based Master's course, students should have developed their academic abilities to the extent necessary to qualify for PhD studies. Besides the academic career the programme prepares its graduates also for a variety of job opportunities in practice e.g. in cross-national and supranational agencies, non-governmental organisations, as intercultural mediator or in the filed of development cooperation, economy and management.

Website: http://www.uni-leipzig.de/gesi/emgs/

#### Partners:

UNIVERSITY OF LEIPZIG, Germany (Co-ordinating institution)
LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE, United Kingdom
WROCLAW UNIVERSITY, Poland
MACQUARIE UNIVERSITY, Australia
UNIVERSITY OF STELLENBOSCH, South Africa
UNIVERSITY OF VIENNA, Austria
ROSKILDE UNIVERSITY, Denmark
DALHOUSIE UNIVERSITY, Canada
UNIVERSITY OF CALIFORNIA, SANTA BARBARA, United States
JAWAHARLAL NEHRU UNIVERSITY, India
FUDAN UNIVERSITY, China

### Contact:

Matthias Middell GLOBAL AND EUROPEAN STUDIES INSTITUTE Emil-Fuchs Str. 1 04105 LEIPZIG - Germany middell@uni-leipzig.de

# **EMIN Economics and Management of Network Industries**

**Duration:** 2 years

## Course description:

Network industries and infrastructures – like telecommunication and energy industries –are subject to market mechanisms more than ever before. While responding to competitive signals and incentives, they still have to deliver their basic services with reasonable security and consistency. To that end, these industries and infrastructures are being liberalised and reregulated across the world. The European Union itself is building its 27-state internal market with a specific set of common guidelines balancing the introduction of competition where possible and regulation where necessary. This creates a need among industries and public institutions to hire skilled professionals who are capable of understanding and designing these complex systems.

The objective of this Masters Course is to train such highly-qualified professionals. Masters students on this course will learn simultaneously the engineering, economics and management principles that are relevant to the network and infrastructure industry. Usually, these skills are acquired separately while in practice they have to be used together to achieve both technical and economical efficiency. This programme therefore replaces the traditional approach to training in this field by a more integrated experience.

The two-year programme enjoys the collaboration of three of the most prestigious European universities in the field: Pontifical University Comillas – Madrid (Spain), noted for its excellence in electricity market regulation, University Paris-Sud 11 (France), renowned for its expertise in economics and management of network industries, and Delft University of Technology (the Netherlands), which is famous for its research and teaching on applied industry and infrastructure economics.

Students must study in at least two countries, and may study in all three participating countries if they wish. If they choose to study in Spain or France they must stay there for a minimum of a semester. If they choose to study in the Netherlands, they must stay for a minimum of two lecture semesters. The vehicular language is English, but also lectures and conferences may take place in French, Spanish or Dutch. The professor/student ratio is around one professor to every two students. The consortium delivers multiple degrees. Each of the institutions will deliver its own Master's degree (in Numeric Economics and Network Industries at Paris-Sud; in the Electric Power Industry at Comillas and in Engineering and Policy Analysis at TU Delft). The specific structure and contents of the Erasmus Mundus Master's Course will be described in an additional Diploma Supplement.

To enrol in the Course, students must have obtained a Bachelor's degree in Engineering, Economics or Management. Students who have obtained the first year of a European Master's degree in these fields, or a business school or engineering advanced diploma may be directly accepted into the second year of the Course. For admission, the consortium requires from each applicant a substantial report explaining their prior studies, motivations and professional plans. A joint admission committee composed of a member of each university and three professionals from the network industries will evaluate the candidates.

Website: http://www.eminmaster.eu

#### Partners:

Comillas Pontifical University—Madrid, Spain (Co-ordinating Institution) University of Paris-Sud 11, France Delft University of Technology, Netherlands

### Contact:

Javier Garcia-González Instituto de Investigación Tecnológica Universidad Pontificia Comillas de Madrid C/Alberto Aguilera, 25 28015 Madrid, SPAIN emin@upcomillas.es

# **EMLE European Master in Law and Economics**

**Duration: 10 months** 

### Course description:

The European Master in Law and Economics (EMLE) is designed to provide students with advanced knowledge in Economic Analysis of Law: the use of economic methods to explain and assess the effects of law. A comparative approach is used to evaluate the strengths and weaknesses of alternative legal rules from an economic perspective. Since differences between national laws have been at the core of European policy making, this Masters course offers unique value concerning the EU's central ambitions.

The EMLE covers all major fields of economic analysis of law, ranging from private law to public law and economic regulation. Students on this programme will become competent to work for private companies, public organizations, economic advisers and large multinational law firms. Graduates are also well prepared for Ph.D. research in Law and Economics. The language of instruction is English, but the master thesis can also be written in another European language, excluding the student's mother tongue. The study programme covers one academic year, divided into three terms. In the first two terms, students are distributed among three teaching centres. This leads to an average class size of 35 students given a maximum of 105 admitted students in the entire programme. In the third term, there are more teaching centres and a lower average class size. More than fifty teachers (both lawyers and economists) offer classes and thesis supervision in the Masters course. In the first and second terms, there are both introductory courses and core courses in the major topics in the economic analysis of law; students also attend one specialized course depending on their second-term university. In the third term, students only follow specialized courses and they write their master thesis.

The Consortium has nine members: the Erasmus University Rotterdam (the Co-ordinating institution in NL), the universities of Aix-Marseille (FR), Bologna (IT), Ghent (BE), Haifa (IL), Hamburg (DE), Vienna (AT), the Indira Gandhi Institute of Develomenmt Reserch at Mumbai (IN), and the Warsaw School of Economics (PL). Every partner university awards a Master degree to students who spent at least one term at that university and have successfully completed the one-year programme. The degree is officially recognised in all the countries involved. Applicants must have law degrees or economics degrees from a recognised university. Students with high grades will be preferred as candidates for admission.

Website: www.emle.org

### Partners:

ERASMUS UNIVERSITY ROTTERDAM, Netherlands (Co-ordinating institution) UNIVERSITY OF AIX-MARSEILLE III PAUL CÉZANNE, France UNIVERSITY OF BOLOGNA, Italy GHENT UNIVERSITY, Belgium UNIVERSITY OF HAIFA, Israel UNIVERSITY OF HAMBURG, Germany INDIRA GANDHI INSTITUTE OF DEVELOPMENT RESEARCH, India UNIVERSITY OF VIENNA, Austria WARSAW SCHOOL OF ECONOMICS, Poland

#### Contact:

Roger Van Den Bergh ERASMUS SCHOOL OF LAW, ROTTERDAM INSTITUTE OF LAW AND ECONOMICS Burgemeester Oudlaan, 50 3062 PA ROTTERDAM - Netherlands r.vandenbergh@frg.eur.nl

# EMMAPA Erasmus Mundus Master in Adapted Physical Activity

**Duration:** 2 years

# **Course description:**

The Erasmus Mundus Master in Adapted Physical Activity – EMMAPA, is a postgraduate university program, providing the state of the art on research and teaching methodology in Adapted Physical activity (APA); and the social, pedagogical and technical aspects of physical activity, adapted to the needs of persons with a disability. The program is organised within the following Universities, that are forming the EMMAPA Master Consortium: The Catholic University of Leuven (KUL), The University of Limerick (UL), the Palacky University Olomouc (UP); Norwegian School of Sport Science (NSSS), the University of Virginia (UV – US); the University of Queensland (UQ - Australia) and Stellenbosch University (US – South Africa). The Master course has a duration of two years, consists in total of 120 ECTS and the official language of instruction is English. The competencies acquired in EMMAPA offer the students a unique opportunity to combine advanced courses in movement, exercise science and applied behaviour analysis to design adapted physical activity programs for individuals with disabilities.

The minimum requirement for applying in the Master Course is a possession of a Bachelor Diploma in Physical Education, Physiotherapy Sport/Movement sciences, and Kinesiology. The first academic year takes place at KUL, while in the second year the students will follow a mandatory mobility period in one of the European consortium universities, choosing from 4 mobility models. An average of 22 third-country students and 18 European students are expected every year. There are approximately 50 full-time professors who will teach in the program. Through bringing together the experts from all over Europe and abroad, the general objective of this Master Course is to prepare the future APA specialist in an open and dynamic education area in order to meet the new demands of the society in this specific field.

The EMMAPA Master Consortium is conferring a "joint diploma": Erasmus Mundus Master in Adapted Physical Activity - one single diploma, issued by the Co-ordinating institution (KUL) that will carry the logos of all 4 European Consortium Universities and the signature of the Rector of the coordinating University (KUL) on behalf of the other Rectors.

Website: http://www.erasmusmundus.be

## Partners:

CATHOLIC UNIVERSITY OF LEUVEN, Belgium (Co-ordinating institution) STELLENBOSCH UNIVERSITY, South Africa UNIVERSITY OF QUEENSLAND, Australia THE NORWEGIAN SCHOOL OF SPORT SCIENCE, Norway UNIVERSITY OF LIMERICK, Ireland PALACKY UNIVERSITY OF OLOMOUC, Czech Republic UNIVERSITY OF VIRGINIA, United States

### Contact:

Bart Nuttin UZ Herestraat 49 - bus 7003 3000 LEUVEN - Belgium bart.nuttin@uz.kuleuven.ac.be

# EMMEP Erasmus Mundus Minerals and Environmental Programme

**Duration:** 2 years

### Course description:

The Erasmus Mundus Minerals and Environmental Programme (EMMEP) is an MSc course to educate new talent, future managers and leaders in the European and worldwide minerals industry. It is taught at multiple locations and leads to a double M.Sc. degree in the field of Minerals and Environmental Engineering. The program accepts 45 EU and 20 non EU students per year. The Masters' course is a two-year 120 ECTS programme in the English language. The consortium offers a unique curriculum with mineral resource and environmental courses in a combination which is not found in a single European country or institution.

Entry requires a Bachelors degree in Resource engineering, or an equivalent discipline. The degree includes a Diploma Supplement describing the itinerary and expertise achieved. The study plan comprises four semesters. Two semesters are reserved for an 8-month joint curriculum at three or four universities. The remaining two semesters are spent at the two universities awarding the double degree.

The three main specializations offered by the programme focus on:

- 1. Extraction of resources
- 2. Processing and recycling of resources
- 3. Environmental and geotechnical issues

Because of the small class sizes the programme has a very favourable professor / student ratio. The partners of the consortium have a well-established research and educational background and long-standing links with Industry and other research / educational institutes.

The objectives of the programme are to provide:

- An excellent international programme leading to a renowned double degree in Minerals and environmental Engineering;
- Educated future leaders for the international and European extractive industry;
- Strengthen the leading position in higher education by combining the areas of excellence of six top European universities;
- Familiarity with key issues concerning sustainable, environmentally friendly acceptable solutions to challenge in the economical supply of primary and secondary resources;
- Research skills for further study (e.g., doctorates, specialised topics required by industry and continuous professional development;
- A European perspective on Resource Engineering and Management, by studying in various European countries;
- A global perspective on resource supply issues and problems;
- Excellent international employment opportunities;
- To develop and expand an international excellence in raw materials supply.

Website: www.emmep.org

# Partners:

Delft University of Technology, Netherlands (Co-ordinating Institution)
Helsinki University of Technology, Finland
University of Miskolc, Hungary
Wrocław University of Technology, Poland
RWTH Aachen University, Germany
University of Exeter, United Kingdom

### Contact:

Hans De Ruiter Delft University of Technology Stevinweg 1 2628 CN Delft, NETHERLANDS j.j.deruiter@tudelft.nl

# EMQAL European Joint Master in Quality in Analytical Laboratories

Duration: 1 year 6 months

## Course description:

Analytical laboratories play an increasingly important role in modern societies: the analysis of drinking water and foods is essential to assure public health; medical decisions must be supported by clinical analysis, environmental analysis support national and international environmental policies, even court trial decisions are based on the results of forensic analysis.

Laboratories are required to adopt quality systems conforming to international standards, in order to assure that results are reliable and comparable worldwide. The European Master in Quality in Analytical Laboratories prepares professionals for analytical laboratories, focusing on laboratory management and quality systems, along with complementing their technical knowledge.

The admission criteria are a first cycle higher education degree (min 180 ECTS) from a European or non-European university in appropriate disciplines such as Health Sciences, Chemical and Biochemical Sciences, Biological Sciences or Environmental Sciences.

The programme duration is 18 month (90 ECTS), consisting of a 1 year (60 ECTS) taught course and a 6 months Project and Thesis (30 ECTS). The main language of instruction is English. Each university also offers intensive language instruction prior to the programme, as well as local language training during the course. A wide choice of modules enables students to acquire competencies in Laboratory Management applied in a variety of fields: water, food, biochemical or clinical analysis. This allows the student to pursue fields that are most interesting for his/her professional development. The study programme lectures are grouped into specialist modules on particular fields of expertise in Quality Management, Analytical Methods and Data Analysis.

The consortium includes five leading European Research institutions: University of Algarve (coordinator); Gdansk University of Technology, University of Bergen, University of Barcelona, University of Cadiz. The location of the taught programme rotates every year, as it is hosted by different European participating institutions in order to promote Teaching Staff Mobility.

Students must gain a minimum of 30 of their credits in a second participating European university. The Qualification obtained is a European Joint Master Degree in Quality in Analytical Laboratories which is awarded by the European universities that the student visited as part of the ERASMUS MUNDUS programme. Details of the modules and research projects that were followed by the students are given in a Diploma Supplement.

Website: http://cursos.ualg.pt/emqal

#### Partners:

University of Algarve, Portugal (Co-ordinating institution) Gdansk University of Technology, Poland University of Bergen, Norway University of Barcelona, Spain University of Cadiz, Spain

## Contact:

Isabel Cavaco University of Algarve Campus de Gambelas 8005-139 Faro, PORTUGAL icavaco@ualg.pt

# EMSD European Master programme in System Dynamics

Duration: 1 year 10 months

## **Course description:**

The European master programme in System Dynamics is the first international master programme in System Dynamics in Europe. It builds on the strengths of four leading universities: the University of Bergen (Norway), Lund University (Sweden), the University of Palermo (Italy) and Radboud University Nijmegen (the Netherlands). The programme is specifically designed for students who are interested in learning how to initiate strategic change in organizations through the use of computer simulation models.

The goal is to teach students everything they need to start an international career in strategic modeling with system dynamics. After completing the master programme, students will know how to build a System Dynamics model, how to apply it to a variety of real life complex problems and how to facilitate the model building process with the client in such a way that not only a high quality model is built, but, equally important, strategic change is accomplished. No other programme in System Dynamics in the world offers this combination of model building, organisational consultation and group facilitation skills.

#### An international experience

While applying to one programme, the curriculum is designed in such a way that a student will enter at least three out of four European universities in different countries. Students spend a semester at each of these universities, and will earn a degree from all the universities that you attend (as part of a joint or multiple degree). Living and learning across different campuses and cultures will be an enriching experience that will help develop the intercultural and personal skills that are needed for starting an international career.

### Career perspectives

The European Master programme in System Dynamics aims to prepare students for an international career in strategic modelling with System Dynamics. The programme will teach the foundations of system dynamics modelling and how to apply SD modelling to a variety of real life complex problems. The second year is dedicated to learning how to facilitate the model building process with clients. These skills will enable students to develop the flexibility required to be successful within European and global organisations, whether it be major consultancy firms, strategic planning departments of larger corporations or in public administrations or NGOs. Our tight links with several major firms in the countries involved in the programme, will allow for work on real life cases and will build links to the professional field.

Due to the broad overview acquired and the systemic approach that is followed in the programme, graduates will also be qualified for more entrepreneurial tasks, either in starting their own enterprise or within established companies. The programme also lays a foundation for further studies (Ph.D).

Website: www.europeansystemdynamics.eu

# Partners:

RADBOUD UNIVERSITY NIJMEGEN, Netherlands (Co-ordinating institution) UNIVERSITY OF PALERMO, Italy UNIVERSITY OF BERGEN, Norway LUND UNIVERSITY, Sweden

#### Contact:

Klaartje Van Genugten NIJMEGEN SCHOOL OF MANAGEMENT Thomas van Aquinostraat 3 6525 GD NIJMEGEN - Netherlands K.vangenugten@fm.ru.nl

# **EMSEP European Masters in Sport and Exercise Psychology**

Duration: 1 year 10 months

## Course description:

The European Masters in Sport and Exercise Psychology (EMSEP) is a new two-year master level programme aimed at students from all over the world holding a Bachelor's degree. The EMSEP programme is organised by four leading European universities in the field: the University of Jyväskylä (JyU, coordinator), the University of Leipzig (UL), the University of Thessaly (UTH) and Lund University (LU). The programme aims at educating highly qualified researchers and professionals for the growing field of SEP, for example, in the areas of motivation, performance, behaviour regulation, counselling, and preventive interventions within sport and exercise. The programme is a timely response to increased demands for experts in the field to address the major challenges related to ill-health and sedentary life style and the world of sports today.

EMSEP partner institutions have particular areas of excellence, which will be accessible to an interested student via the mobility periods. The areas of excellence include: JyU - Social and emotional learning in exercise; Cultural sport and exercise psychology; LU - Group dynamics and team performance; UTH - Exercise and health; Motivational climate in physical education and sport; UL - Elite sport and performance enhancement; Gender and social aspects of exercise and sport.

The curriculum of the two-year EMSEP course consists of 120 ECTS. The EMSEP provides a stimulating and challenging programme of study comprised of lectures and seminars, independent ICT-enhanced study, a joint intensive course, practicum placement, and a sustained Master's research project. The language of instruction is English. The students spend the first semester in their home universities (JyU, LU or UTH). In semester 2, all the students study at Leipzig, where they benefit from instruction by the experts of the consortium and scholars coming from all over the world. The Intensive programme 'European dimensions in SEP' will also be organised during the semester 2. Semester 3 includes a second mobility period (optional for some students), which provides additional opportunities for students to increase their intercultural competence. Semester 4 will be devoted to thesis work at the home university.

The EMSEP course prepares students for a research and/or professional career in Sport and Exercise Psychology through a combination of coursework, independent study, internship, and an extensive hands-on research experience. After successful completion of the course, graduates will be awarded a double degree. EMSEP graduates are expected to find employment in the private and public sectors of exercise, well-being and sport, for example, as health and fitness leaders, instructors, coaches, performance enhancement or psychological health consultants, or academic researchers in the field.

The admission requirements include a Bachelor's degree with good grades in sport sciences or psychology, good command of English, basic knowledge of research methods and proven interest in the field of SEP. The application deadline for the course is December 15. Annual student intake is 24.

Website: www.jyu.fi/emsep

### Partners:

UNIVERSITY OF JYVÄSKYLÄ, Finland (Co-ordinating institution) LUND UNIVERSITY, Sweden UNIVERSITY OF THESSALY, Greece UNIVERSITY OF LEIPZIG, Germany

#### Contact:

Taru Lintunen
Department of Sport Sciences
PO Box 35
40014 UNIVERSITY OF JYVÄSKYLÄ - Finland
taru.lintunen@jyu.fi

# **EMSHIP European Education in Advanced Ship Design**

**Duration:** 1 year 6 months (90 credits)

# Course description:

The objective of the **EMSHIP** Erasmus Mundus Master is to provide a high education in Naval Architecture and Ship Design, through a 1.5 year - 90 Credits - Master Course accessible as Post Graduate studies, leading to a Double Master Degree from ULG-Liege, Belgium and ECN-Nantes, France) and a supplement diploma from Germany (Rostock), Italy (Genoa), Poland (Szczecin) or Romania (Galati).

**EMSHIP** corresponds directly to the needs of the European and Worldwide Marine Industry. The targeted students are:

- students having already a master degree in another engineering field that would like to get a specialisation in Ship Design.
- active engineering officers with 3-5 years seafaring work experience, that are looking for new knowledge to better fulfil their carrier objectives. There is indeeed a large demand from shipowners and port authorities to hire such officers, knowing what onboard service is, to manage and maintain their fleet.
- students looking for complementary education in the Sailing Pleasure Crafts and Mega/Motor Yachts, but also in Safer and Cleaner Marine and Fluvial Transportation Mode.
- engineers searching for advanced education in Hydrodynamics in Ship Design, Ship Production, CAD, Information Technology and Ship Structures.

**EMSHIP** will give the opportunity to students to demonstrate their talents and offer them the necessary skills to work in this challenging industry. The mobility scheme includes 3 semesters in 3 different countries and cultures:

Semester 1 : Liege, Belgium

University of Liege (ANAST – ULG) - **Ship Technology, Ship Structure, Ship Hydrodynamics and Ship Design** 

Semester 2 : Nantes, France

Ecole Centrale de Nantes (ECN) - Ship Hydrodynamic and Initiation to Research Activities

Semester 3: Four available locations are available.

Education will include: Advanced lectures, Master Thesis and Internship

- Galati (UGAL, Romania)

- Genoa (UNIGE, Italy)

- Rostock (URO, Germany)

Advanced Hydrodynamics in Ship Design

Sailing Yacht and Pleasure Motor Yacht

Ship Production, CAD, Information Technology

- Noslock (ONO, Germany) Sinp Froduction, CAD, informatio

- Szczecin (ZUT, Poland) Advanced Ship Structures

In addition to six of the most well-known universities in Europe, the EMSHIP consortium includes six associated parters from prestigious worldwide universities: University of Michigan (USA), University of Osaka (Japan), Federal University of Amazon (Brazil), VIMARU Maritime University (Vietnam), University of New South Wales (Australia) and University of Sciences and Technology of Oran (Algeria), that will have an advisory role and will assist in recruitment and assessment, with the support of an Industrial Advisory Board. Finally the European Association of Universities in Marine Technology (WEGEMT) assists the consortium in the management, web site and and dissemination of information to potential students.

Websites: www.emship.eu

www.anast.ulg.ac.be/EMSHIP

## Partners:

UNIVERSITY OF LIEGE (ULG) - ANAST, Belgium (Coordinating institution)
ECOLE CENTRALE OF NANTES (ECN), France
UNIVERSITY OF GALATI DUNAREA DE JOS (UGAL), Romania
UNIVERSITY OF ROSTOCK (URO), Germany
UNIVERSITY OF GENOVA (UNIGE), Italy

WEST POMERANIAN UNIVERSITY OF TECHNOLOGY (ZUT), SZCZECIN, Poland

# Contact:

Philippe Rigo ANAST –Naval Architecture - ARGENCO

1 chemin des Chevreuils, B52/3

4000 LIEGE - Belgium

Email : Ph.rigo@ulg.ac.be - Tel:+32 -4 – 366 93 66

# EMSRHS European Master in Sustainable Regional Health Systems

Duration: 2 years

### Course description:

European Master in Sustainable Regional Health Systems aims to fill the gap by approaching the theme of health care management and planning on a regional level. Considering the increasing role of regions in the European Union and the ongoing debate on active citizenship, it is essential to contribute to regional development agendas that help achieve the goals of the Lisbon agenda (growth, employment, competitiveness) while protecting the environment, strengthening social cohesion and promoting a high level of health among their populations.

The European Master's in Sustainable Regional Health Systems is 2 years long (120 ECTS credits) an inter-university, multidisciplinary programme that provides high quality academic education and professional competencies for personnel working or intending to work in the area of health management.

The programme will be delivered at 4 European universities:

- 1. 1<sup>st</sup> semester Introduction workshop (5 ECTS) and Core modules (25 ECTS) related to the macro level of health system management and planning- University of Deusto (Spain);
- 2. 2<sup>nd</sup> semester Management courses at middle and micro level (30 ECTS)- Corvinus University of Budapest (Hungary);
- 3. 3<sup>rd</sup> semester Specialisation courses(optional): Social aspects of health care (30 ECTS) -Vilnius University (Lithuania) or Patient safety and quality issues (30 ECTS)- University of Verona (Italy);
- 4. 4<sup>th</sup> semester Research project (30 ECTS) at one of above mentioned universities. A Joint Master's degree will be awarded after successful obtaining of all the credits.

The programme will be open to well motivated students who have completed Bachelor or equivalent degree in Sociology, Psychology, Law, Political Science, Anthropology, History, Medicine, Social Work, Social Education, Nursing, Public Health that they want to specialize in the scope of the health.

Website: http://ErasmusMundus.tprs.vu.lt

### Partners:

Vilnius University, Lithuania (Co-ordinating institution) Corvinus University of Budapest, Hungary University of Verona, Italy University of Deusto, Spain

#### Contact:

Benediktas Juodka Vilnius University Universiteto str3 01513 Vilnius, LITHUANIA marija.veniute@mf.vu.lt

# EMTM European Master in Tourism Management

**Duration:** 2 years

# Course description:

Tourism is a social and economic phenomenon, which calls for a holistic approach to tourism education where the broader aims of the industry and society need to be explicitly addressed. The indispensable complexity of the tourism phenomenon demands professionals with a far-reaching and integrated understanding of the multiple disciplines and paradigms that are concerned with tourism development and management. The European Master in Tourism Management (EMTM) aims at giving students advanced knowledge in contemporary tourism management in order to become international professional consultants, innovative entrepreneurs, government and public administration officials, tourism business managers, qualified employees, and academic researchers in the field of tourism.

EMTM is a fully integrated two-year joint European programme promoted and tailor-made by three university partners: the University of Girona (Spain), known for its research and pursuit of teaching excellence in tourism product innovation and destination management; the University of Southern Denmark (Denmark), internationally recognised for its research and education in the field of sustainable tourism development; and the University of Ljubljana (Slovenia), renowned for its excellence in tourism policy design and tourism environmental management and economics. Three different national, geographical and cultural European realities, and three different faculties - humanities, economics and tourism - are directly involved and experienced by students in the course.

The main objectives of the course are: (a) to prepare future professionals to strategically manage and make sustainable and effective decisions in placements of high responsibility in tourism institutions; (b) to provide future professionals with an integrated knowledge of the dynamics of tourism development, the principles of sustainable management, environmental issues, the role of cultural diversity and creativity for innovation and product development, the governance of tourism networks and the quality management of customer services; and (c) to train future researchers in the field of tourism management.

EMTM accomplishes these objectives by securing a multi-paradigmatic approach to tourism management, where the relevant disciplines are bound together through the frameworks of sustainability, competitiveness and innovation; and by emphasising the paradoxical nature of, and integrative skills needed in the effective management of tourism.

All EMTM students follow a common mandatory mobility scheme, starting in Esbjerg, Denmark, where they are introduced, at an advanced level, to the conceptualization of tourism development with particular attention to sustainability, strategic communication and economics. Moving next to Ljubliana, Slovenia, students learn about policy instruments and management tools available for tourism policy and strategy design, with emphasis on environmental issues in tourism development. Spending the subsequent semester in Girona, Spain, students become competent in effectively implementing tourism with particular emphasis on the effective management of organizational networks, consumers, innovation processes and new tourism products. Finally, the fourth semester is exclusively devoted to the completion of the students' Master thesis.

Website: www.emtmmaster.net

### Partners:

UNIVERSITY OF GIRONA, Spain (Coordinating institution) UNIVERSITY OF LJUBLJANA, Slovenia UNIVERSITY OF SOUTHERN DENMARK, Denmark

#### Contact:

Jaume Guia Facultat de Turisme Pujada dels Alemanys, 4 17071 GIRONA - Spain jaume.guia@udg.edu

# **EMTTLF European Masters in Transnational Trade Law Finance**

Duration: 2 years

## Course description:

The course in Transnational Law and Finance contains 120 ECTS credits that the students will follow in two academic years and in three of the four participating institutions.

The Programme offers one year of core courses, which provide the fundamental competencies at an advanced level, needed to be able to confront trans-national trade cases. The itinerary is built in a complementary manner starting with the University of Deusto that will focus on the European set up, and moving forward to a more comparative and worldwide approach in the case of Tilburg.

## 1st Component. (Deusto)

In relation to methodology this semester sets the bases of problem-solving and analytical thinking at an advanced level counting on the cooperation and relevant case studies offered by representatives of International Organizations dealing with experience in the field of international transactions. In relation to the contents developed, the Master begins offering a view of the main achievements of those organizations as well as an analysis of the main European Union instruments in Private International Law relevant for Trans-national Trade.

# 2nd component. (Tilburg)

During this period, the students move from the European level to the international context. The international and comparative focus prepares them for working in international and emerging markets. Also they begin having an option that prepares them to choose the specialization in the coming year.

For the second year three specialization areas offered: Law and Finances in the Institute of Law and Finance in Frankfurt University and European Business Law and Industrial and Intellectual Property in the Robert Schumann Strasbourg University. The Programme presents therefore two important elements:

- The core courses that must be followed by all the students. This part of the Master offers
  every European or non-European student the necessary tools for the analysis of trans-national
  trade operations.
- The specialization in which the students can choose and the professional or research path.

The course also offers linguistic and thematic preparatory courses.

## 3rd Component: Specializations.

The third component gives the students the possibility of deepening their knowledge in three different fields of study, European Business Law; Finance, and Industrial and Intellectual Property. The students, who will be able to choose between the professional and research path, will be divided in three groups that will follow 60 ECTS either in Frankfurt or in Strasbourg.

## 4th Component: Research/internship

The fourth semester includes the forth component of the Programme: Research/internship According to prior experience and future professional paths, master students will be able to choose a balance between two elements. The research component aims at professionals able to:

- Elaborate innovative solutions to the problems.
- Approach reality with creative thinking
- Analyse data and asses results

Website: http://www.transnational.deusto.es/EMTTL

#### Partners:

University of Deusto, Spain (Co-ordinating institution) Robert Schumann University - Strasbourg III, France Tilburg University, Netherlands Institute for Law and Finance, Germany

## Contact:

Maria Pilar Canedo Arrillaga University of Deusto Avenida de las Universidades, 24 48007 Bilbao, SPAIN mpcanedo@der.deusto.es

# EMMSP Erasmus Mundus Master of Science in Photonics

**Duration:** 2 years

# Course description:

The objective of this two year master's course is to provide a top-level education in photonics with a strong European dimension. It provides a multi-disciplinary programme covering basic physics, material technologies, and electronics, applied in different fields. Students will be trained to become photonics specialists, synthesizing top-level research with a high-quality, multi-cultural education environment. The University of Gent (Belgium), the Free University of Brussels, (Belgium), the University of St Andrews (UK), the Royal Institute of Technology (Sweden), and the Heriot Watt University (UK) organize this Master's Course, each offering a particularly national or local perspective of the field. The research excellence of the five universities involved covers the fundamental research of this field (e.g. nano-, and micro-photonic components in silicon, III-V semiconductors and plastics) and applications (e.g. optical sensing, data and telecommunications, quantum cryptography, displays).

Students will spend one year in one country and a second year in another country, according to their preferences. During the first year (spent either in the UK, Sweden or Belgium), the focus will be on core photonics courses, whereas the second year (spent in any of the other institutions) will be dedicated to writing the Master thesis. In addition, each student will choose to take a number of advanced photonics courses, general multidisciplinary courses, and several transferable skills courses. A common course will be offered during the summer after the first year to bring all students together in one location. Students will be able to complete the Master thesis in their country of choice.

For photonics-related courses, the language of instruction is English. The local language (Dutch, Swedish or English) will be used for a limited number of elective courses designed to impart transferable skills. The expected student population is 50 each year. For these 50 students, there will be about 30 professors (counting only the core photonics professors). Successful students receive the degrees of the universities they have visited. The two Belgian universities deliver a joint degree as do the two institutions from the UK. As for the Swedish institution, they award their national Master's degree.

Applicants should have a Bachelor degree in electrical engineering, physics, applied physics or a related subject, with a level of achievement equivalent to a first class honours or a good second class. Other criteria that will be taken into account are awards, English proficiency, external references and details of earlier project work.

Website: http://www.master-photonics.org/

#### Partners:

Ghent University, Belgium (Co-ordinating Institution) Free University of Brussels, Belgium University of St Andrews, United Kingdom Heriot-Watt University, United Kingdom Royal Institute of Technology in Stockholm, Sweden

### Contact:

Roel Baets
Ghent University
Department of Information Technology
Sint-Pietersnieuwstraat 41
9000 Ghent - BELGIUM
emmp@intec.UGent.be

### EU4M

# **European Union Master's Course in Mechatronic** and Micro-mechatronic Systems

**Duration:** 2 years

# Course description:

Mechatronic and also Micro-Mechatronic Systems cover the development and also the maintenance of products and production systems which consist of a very high level of complexity (cars, airplanes, space laboratories, micro-laboratories, mobile communication systems, self adaptive systems and robotics, process chains).

Important elements of our higher education with 120 credit points according to ECTS: Scientific work related to current research plans including enabling design, modelling and simulation.

**Professional Qualification:** interdisciplinary co-operation in groups with the aim of solving complex mechatronic tasks

**Management Qualification:** ability to adapt quickly to various tasks and problems from various fields of engineering

**Adaptability and Flexibility:** ability to communicate easily with people from different countries in different languages

**Qualification in Intercultural Communication:** because of intensive co-operations with industry of each member institution of EU4M-Consortium.

### **Guarantee of the High Quality Of Education**

Languages used in lectures are the local languages French and/or German and/or Spanish. Language learning and integration into the society is supported by our TandemPlusSystem, where each third-country student will work together with local/European students and his mentor, a local professor. During the first year at each institution of EU4M-Consortium identical lessons are given to bring the students up to the same level of knowledge. The second year has to be studied at one of the two other institutions (the students have to move to their chosen second years institution); each of the three institutions offers his specialisations in the field and applications of mechatronic and micromechatronic systems. Theoretical lessons are given in combination with practical trainees in cooperation with industry and research centres. There will be an approximate supervision ratio of students by professors of 1.

Mobility arrangements between Universidad de Oviedo, Oviedo (E) www.uniovi.es , Hochschule Karlsruhe (D) www.hs-karlsruhe.de , ENSMM - Besancon (F) www.ens2m.fr depending on the language skills and the aims of the specialisation of each students.

For the second year specialisations are offered by:

**Universidad de Oviedo** in Automation, instrumentation, production technologies, Robotics **ENSMM Besancon** in Automation, Microsystems and Micro-assembly, Micro Robotics **Karlsruhe University of Applied Sciences** in Automation, Microsystems and hybrid integration, automotive mechatronics, renewable energies.

Thirty credit points are awarded for the Master's Thesis and the final examination. European and third-country students apply directly to the Co-ordinator of the EU4M-Consortium at the HSKA – Karlsruhe; e-mail: eu4m-consortium@hs-karlsruhe.de. All applications are examined by the admission and graduation committee. A very good first degree, which is at least equivalent to a three-year bachelor qualification in the areas of mechanical and electrical engineering, industrial engineering or science, is a prerequisite for this program. It is mandatory that students certificate two language skills (French and/or German and/or Spanish) through an appropriately recognized certificate i.e. the TOEFL/TOEIC certificate of at least 450 points or the level B1 Threshold of the Common European Framework.

Website: www.eu4m.eu

## Partners:

Karlsruhe University of Applied Sciences, Germany (Co-ordinating Institution)
National Engineering Institute in Mechanics and Micro-Technologies, Besancon, France
University of Oviedo, Spain

# Contact:

Fritz J. Neff Hochschule Karlsruhe – Technik und Wirtschaft Moltkestraße 30 76133 Karlsruhe, GERMANY

# EUMAINE European Master of Science in Nematology

**Duration:** 2 years

## Course description:

Nematodes are everywhere and play a variety of roles. They are among the most harmful organisms of crops, especially in the tropics. However, several species are very promising as natural antagonists and can be used in bio-control programmes against pest insects. Because of their ubiquitous presence, overwhelming densities and diversity (sometimes compared to insects) the free-living nematodes are an ideal tool for biodiversity studies as well. Moreover, they are used as bio-indicators of pollution in both terrestrial and aquatic environments.

The European Master of Science in Nematology (EUMAINE) programme, brings together some of the European leading universities and research institutes active in Nematology. The objective of the EUMAINE is to give participants a thorough basis, practical skills and updated knowledge in all aspects of plant- and insect-parasitic nematodes, as well as free-living aquatic and soil nematodes and to ensure that the student becomes familiar with current theoretical and applied aspects of scientific research through direct contact with renowned nematologists and nematological institutes from different countries. It fulfils the international needs for training highly qualified nematologists with a multidisciplinary knowledge in the diverse fields of Nematology.

Depending upon the interest and background students can choose between 2 modules: Nematology applied to agro-ecosystems or Nematology applied to natural ecosystems. During this 2-years Master programme students will spend the first semester, covering basic Nematology courses in English, at Ghent University (Belgium) and from the second semester onwards they can select Specialised Nematology and supporting courses at any of the partner universities: the University of Jaén (Spain), the University of Evora (Portugal), the University of Bielefeld (Germany) or Ghent University (Belgium) where they will be staying for at least one more semester. Some courses are taught in Spanish, Portuguese and German.

Because of its multidisciplinary approach the programme prepares the student for a career in very diverse environments and disciplines. The course is open for candidates having a University BSc degree in agricultural, biological or environmental sciences with a degree equivalent to first class honours or second class upper. An international educational committee will select the candidates up to a maximum of 28 participants per year.

Students who successful finish the programme will be awarded the degree of European Master of Science in Nematology and will be given a joint degree among the universities involved.

Website: www.eumaine.ugent.be

#### Partners:

Ghent University, Belgium (Co-ordinating institution) University of Jaén, Spain Bielefeld University, Germany University of Évora, Portugal

#### Contact:

Maurice Moens
Ghent University
Ledeganckstraat 35
9000 Ghent, BELGIUM
maurice.moens@ugent.be

# EURHEO European Masters in Engineering Rheology

**Duration:** 2 years

## Course description:

The objective of EURHEO – European Masters in Engineering Rheology is to offer an advanced education programme on Rheology and its applications to different Engineering areas. EURHEO combines the expertise of seven leading European Universities in the field of Rheology and the syllabus is designed to provide its graduates with the necessary competences to understand the relevance of Rheology in Materials Science and Engineering and apply the knowledge gained in solving real-world engineering problems both autonomously and included in multidisciplinary research teams.

The Masters Course will have a duration of 120 ECTS credits, or 2 academic years, using English as the primary language of instruction with French and Spanish as secondary languages. The size of the student population is 35 per annum and the professor to student ratio is approximately 1/2, as opposed to typical values of 1/10 in Engineering.

In the first year the students will take the Primary Studies Programme in one of six partner Universities according to their background and area of election. This first year is designed to give students a strong basic education in the different areas of Materials Science and Engineering to which Rheology is directly relevant.

The second year will consist of an Integrated Studies Programme, taken at a different University from that where the student attended in the first year; initially there will be general courses on the main areas of application of Rheology, these being designed to impart to students basic knowledge on Materials Science and Engineering, Instrumentation and Experimental Rheology and Theoretical and Computational Rheology. These will be followed by Advanced Topical courses that will be devoted to the in depth study of particular areas of Rheology that are of specific interest to each individual student. Finally, there will be a final R&TD project that will be geared towards scientific or industrial research. Each student will have an individually tailored study plan for the two years.

The Higher Education Institutions involved are the University of Minho (Portugal), Leuven Catholic University (Belgium), Louvain Catholic University (Belgium), University of Huelva (Spain), University of Calabria (Italy), the Grenoble Institute of Technology – University Joseph Fourier (France) and the University of Ljubljana (Slovenia). The awarded degree will be a Double Degree from the institutions involved in each student's mobility. The admission criteria include a good quality undergraduate degree with a minimum of 180 ECTS credits or equivalent qualifications in relevant areas such as Engineering, Exact Sciences and Natural Sciences

Website: www.uminho.pt/eurheo

## Partners:

University of Minho, Portugal (Co-ordinating Institution)
University of Calabria, Italy
University of Huelva, Spain
Joseph Fourier University/Grenoble Polytechnic National Institute, France
University of Ljubljana, Slovenia
Catholic University Louvain, Belgium
Catholic University Leuven, Belgium

## Contact:

Joao Maia University of Minho Campus of Azurém 4800-058 Guimaraes, PORTUGAL jmaia@dep.uminho.pt

# EURMed Etudes Urbaines en Régions Méditerranéennes

Duration: 2 years

## Course description:

The Masters degree in "Urban Studies in Mediterranean Regions" trains specialists in sustainable development planning, capable of carrying out research in Mediterranean-type regions, marked by coastlines facing both increasing urbanisation, and major changes in their hinterlands.

The consortium offers a highly interdisciplinary programme: urban and rural planning (UPCAM), political science, sociology and regional studies (USG), geography and history (US), and architecture and town planning (UTL). The programme covers four semesters and confers 120 ECTS credits. Courses are given in Spanish, French, Italian and Portuguese. Each year, up to 60 students are accepted by the consortium, including 13 from non-EU countries.

The first year is devoted to the fundamental principles underlying analysis and regional projects (2 x 30 ECTS credits). It takes place either in Aix-Marseille or in Seville. Specialist studies are undertaken in the third semester (30 ECTS credits) which leads to the setting-up of a common regional planning assessment. The fourth semester (30 ECTS credits) focuses on the design of a regional project based on the assessment made in the third semester, and /or a personal dissertation, as well as an internship. Students are required to study in at least two of the consortium's institutions, and a dual or multiple Masters degree will be awarded.

Applicants for the Eurmed Masters degree must hold a bachelor degree or a *licence* (180 ECTS credits) in planning, architecture, geography, urban studies or any other area of study recognised by the consortium. Applicants to the Technical University of Lisbon for semesters 3 and 4 must have undergone technical training prior to application. Applicants must have a good command of at least two of the languages used within the consortium. Students will be selected on the basis of their prior academic achievements and their command of the languages used.

**Website:** http://erasmus-mundus-eurmed.univ-cezanne.fr/index.htm

http://www.iar.univ-cezanne.fr

#### Partners:

University of Aix-Marseille III Paul Cézanne, France (Co-ordinating institution) University of Seville, Spain University of Genoa, Italy Technical University of Lisbon, Portugal

#### Contact:

Daniel Pinson UNIVERSITE PAUL CÉZANNE AIX-MARSEILLE III Institut d'Urbanisme et d'Aménagement Régional 3, avenue Robert Schuman 13 628 - Aix-en-Provence Cedex 1, France daniel.pinson@univ.u-3mrs.fr

# Euro Aquae Euro Hydroinformatics and Water Management

**Duration:** 2 years

## Course description:

Evolution of human activities, development of technology and economic constraints, in the foreground of climate changes and growing population, induce situations even more complex to manage. Sustainable development and, above all, management of water resources represent a major challenge for postindustrial economy and urban social organization. The essential aim of water management worldwide is to minimize or avoid crisis risks in water supply, waste water treatment, water scarcity, floods, etc.

Initiated in Europe more than 25 years ago, hydroinformatics emerge as the central element for the progress of modeling activities and management of capacities, either on the theoretical side or in the operational field. Development of ICT allows for a synergetic use of simulation tools and communication technologies within a single methodological approach dealing with physical, social and economical aspects. The only successful issue to the above challenge implies common views/actions from decision makers and users (population, governments, administration, elected bodies, NGOs...) and from executive bodies (water companies).

EuroAquae MSc prepares and trains future scientists or executive engineers in charge of modelling/managing in hydro-technological and environmental projects. These professionals have vocation to assist local, national and international bodies and to be involved in private companies.

The master is organized in a pedagogic continuum to provide introduction and common knowledge/soft skills (sem.1 all EU locations), acquisition and use of Hydroinformatics concepts, methods and tools (sem.2 UK), a thematic specialisation: hydroinformatics systems, urban waters management, inland waters management, decision support systems (sem.3 all EU & Third countries locations except UK) and for semester 4 (all locations), a research project or a professional practice. The mobility scheme covers from 3 to 5 locations. Under specific conditions participants can follow lectues and received credits with the non European partner institutions.

A strong partnership established with the leading industrial actors of the water domain offers to the participants multiple opportunities for their carreers. Lectures are given in English for 40 participants mixing European and third-country students. The consortium issues a joint degree defined as MSc in Hydroinformatics & Water Management recognized by all the participating countries.

Website: www.euroaquae.org

### Partners:

UNIVERSITY OF NICE - SOPHIA ANTIPOLIS, France (Co-ordinating institution)
TECHNICAL UNIVERSITY OF CATALONIA, Spain
BRANDENBURG TECHNICAL UNIVERSITY COTTBUS, Germany
UNIVERSITY OF NEWCASTLE UPON TYNE, United Kingdom
BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS, Hungary
ECOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE, Switzerland
FEDERAL TECHNICAL UNIVERSITY ZURICH, Switzerland
UNIVERSITY OF INCHEON, South Korea
INDIAN INSTITUTE OF TECHNOLOGY MADRAS, India
NATIONAL UNIVERSITY OF THE LITTORAL, Argentina
NATIONAL UNIVERSITY OF SINGAPORE/TROPICAL MARINE SCIENCE INSTITUTE, Singapore

## Contact:

Philippe Gourbesville
UNIVERSITY OF NICE SOPHIA-ANTIPOLIS
POLYTECH'NICE SOPHIA
930, route des Colles
06903 NICE CEDEX 2 - France
philippe.gourbesville@unice.fr

### **EUROCULTURE**

Duration: 1 year 4 months

#### Course description:

Euroculture is a 90 ECTS Master of Arts programme which runs during 3 semesters and is offered by a consortium of six universities, in cooperation with four renowned non-European universities (Indiana-USA, Osaka-Japan, Pune-India and UNAM-Mexico). The course addresses the current topics and challenges of the EU and students are taught to reflect on the development of the social-cultural dimensions of the EU.

Indispensible in this regard is knowledge of the current political governance of the EU and of political tensions related to the replacement of political sovereignty and authority and how this effects the EU. Both push and pull factors at work in the EU are studied. The programme uses relevant theories, approaches and methods in social, political and cultural sciences to pay special attention to: the debated constitution and breaking up of political loyalties and identities; regional, national and supranational dimensions of the European democratic development; mobility, migration and interculturality in a multicultural society; and the fading away of inner frontiers and the formation of new borders.

It is a multi- and interdisciplinary programme offering students the opportunity to study and discuss European issues such as multiculturalism, current political governance, European identity and evolving social-political processes. The international dimension of the programme allows for transnational cross-over comparisons of relevant concepts and their understanding in different regions in the world.

The language of instruction is English. The programme involves 40 professors and around 120 students (limited to 20 students per university). Upon completion, the consortium universities provide a double degree.

Applicants must have a good level first-cycle degree in a discipline of relevance to Euroculture, a recognised level of proficiency in English, and be able to provide evidence of motivation and research/work experience.

Website: http://www.euroculturemaster.org

### Partners:

University of Groningen, Netherlands (Co-ordinating Institution)
Uppsala University, Sweden
University of Deusto, Spain
University of Göttingen, Germany
Jagiellonian University, Poland
Palacky University of Olomouc, Czech Republic

#### Contact:

Robert Wagenaar University of Groningen Oude Kijk in 't Jatstraat 26 9712 EK Groningen, NETHERLANDS Euroculture@rug.nl

# EUROMIME Master européen en Ingénierie des Médias pour l'Education

Duration: 1 year 9 months

## Course description:

EUROMIME is a European Master in Media Technology for Education. It trains students to become project managers in the sector of design, development and implementation of training tools using online digital media. It also trains researchers specialised in studies on the usage of these tools. The Master, which qualifies one for subsequent doctoral studies, prepares the students for employment in a commercial or public industrial structure as well as for a university career. Many of the students who have graduated are working in public or private structures involved in distance learning projects.

The course is multidisciplinary. Based on a job competency referential, it is organised into five complementary domains: technology, educational technology, management, research methodologies and tools, communication skills.

EUROMIME proposes high standards in teaching in conjunction with projects involving industrial partners, professional internships, research internships, research seminars, participation at several international symposia and final term dissertations.

The course consists of a preparation stage by correspondence carried out in the country of origin followed by a two-year course in the universities of the consortium (from September of the year N to September of the year N+2).

The master is organised by a consortium of seven universities: three European (University of Poitiers, Technical University of Lisbon and National University for Distance Education of Madrid) and four Latin American universities (National Autonomous University of Mexico, University of Brasilia, Catholic University of Peru at Lima and Los Lagos University in Chile at Osorno). The main part of the studies is carried out in Europe along with study visits to Latin America, which are obligatory for European students and optional for international students. The seven universities of the consortium, which are renowned for their expertise in the field of educational technologies, develop other programmes of study and research actions with which students can be associated.

The course is conducted in the national languages of the institutions concerned (French, Portuguese and Spanish). A very significant linguistic preparation allows English-speaking students who do not have mastery over the three working languages to get admission.

At the end of the course, the students are awarded degrees from the three European universities and receive an additional joint certificate prepared by all the universities of the consortium. The students also receive certificates according to their level of mastery of the three languages of the consortium (TCF, DPLE and DELE).

Website: www.euromime.org

#### Partners:

UNIVERSITY OF POITIERS, France (Co-ordinating institution) TECHNICAL UNIVERSITY OF LISBON, Portugal NATIONAL UNIVERSITY FOR DISTANCE EDUCATION, Spain

### Contact:

Jean-François Cerisier IME-LETTRES ET LANGUES 95 Avenue du Recteur Pineau 86022 POITIERS - France cerisier@univ-poitiers.fr

# Europhilosophie German and French Philosophy in the European Context

**Duration:** 2 years

# Course description:

The Erasmus Mundus Masters Course "Philosophies allemande et française dans l'espace européen" (Europhilosophie) provides high-level education on researching the history of modern and contemporary German and French philosophy, with the aim of developing a global community of researchers which is specialised in the study of the specific contribution made by German and French philosophies to European and world culture, and which can underline the potential that these philosophies have to help answer topical questions of common interest. It covers the history and current state of German and French philosophy from the point of view of the dynamic interaction that has always existed between them. Key areas for research in the Europhilosophie masters are: classical German philosophy (from Kant to Marx), phenomenology, both German (Husserl, Heidegger) and French (Sartre, Merleau-Ponty, Ricœur), contemporary French philosophy (Bergson, Deleuze, Foucault).

The Masters uses research to teach research. It is based on the philosphy research units within the universities making up the consortium and initiates its students into the methods of teamwork and the production of research by offering them the option of taking part in the work and editorial projects managed by the Europhilosophie partners. Working in association with universities from the Americas (United States and Brazil) and from Asia (Japan), the Europhilosophie masters emphasises what has become of French and German philosophies outside the Eropean context. The course seeks to be a real school of contemporary philosophy in a globalised world.

Website: http://www.europhilosophie.eu/mundus/

#### Partners:

University of Toulouse II Le Mirail, France (Co-ordinating institution) Catholic Univerity of Louvain, Belgium
Charles University of Prague, Czech Republic
University of Wuppertal, Germany
Ludwig-Maximilians University of Munich, Geramny
Ruhr University of Bochum, Germany
University of Luxembourg, Luxembourg

### Contact:

Jean-Christophe Goddard
UNIVERSITE DE TOULOUSE LE MIRAIL - TOULOUSE II
Pavillon de la Recherche
Erasmus Mundus EuroPhilosophie
ERRAPHIS - Bureau 144
5 allées Machado
31058 Toulouse Cedex 09 - France
tel: +33 5 6150 3746 / +33 6 76982588

# EUROPHOTONICS Master in Photonics Engineering, Nanophotonics and Biophotonics

**Duration: 2 years** 

# **Course description:**

The Master for Photonics Engineering, Nanophotonics and Biophotonics covers one of the most expanding field in physics and material sciences, dealing with the control, manipulation and monitoring of light and its interaction with matter.

This master program aims at giving an extensive two-year teaching program from fundamentals to advanced research topics in Photonics and its interdisciplinary applications. Master students benefiting from this program will be able to work on today's new challenges in their academic or applied research carriers: understanding and control matter and optical phenomena at the ultimate nanometric scale, providing new imaging tools for the most complex biological processes from cells and tissues to clinical applications, bringing original tools in line with future optical devices.

This two years master program is organized by three groups of institutions: Paul Cézanne Aix Marseille III University (France), Universität Karlsruhe (TH) / Karlsruhe School of Optics & Photonics (Germany), Universitat Politecnica de Catalunya/Universitat Autonoma de Barcelona/ University of Barcelona/ICFO (Institut de Ciences Fotoniques) (Spain). These institutions are recognized for their high quality training and research centers in the field of Optics and Photonics and their applications, with the unique opportunity to benefit from the presence of excellence and interdisciplinary research institutes, high level advice by professors and administrative staff, as well as local companies and international cooperation networking.

Students selected on the basis of their scientific and English-language levels will follow a first semester of fundamental lectures in optics and its applications in Marseille. The second semester on core subjects will be spent in Kalsruhe. The third specialization semester is proposed as a choice between the three institutions: Marseille (imaging: biophotonics/biomedical optics/astronomy), Karlsruhe (photonic materials and devices/nanobiology/optical engineering), and Barcelona (quantum optics/nanophotonics/optical engineering). The last semester is dedicated to the master thesis and summer school.

This program is dedicated to students with background in Physics or Engineering, who will receive a multiple master diploma awarded from the universities where they spent their semesters. The teaching language is primarily English, although some lectures can be given in the local languages supported by training.

Website: europhotonics.org; master-europhotonics.org

### Partners:

UNIVERSITY OF AIX-MARSEILLE III PAUL CÉZANNE, France (Co-ordinating institution) UNIVERSITY OF KARLSRUHE, Germany TECHNICAL UNIVERSITY OF CATALONIA, Spain AUTONOMOUS UNIVERSITY OF BARCELONA, Spain UNIVERSITY OF BARCELONA, Spain INSTITUTE OF PHOTONIC SCIENCES, Spain

#### Contact:

Hugues Giovannini
INSTITUT FRESNEL
Domaine Universitaire St-Jérôme
13397 MARSEILLE CEDEX 20 - France
Hugues.giovannini@fresnel.fr / sophie.brasselet@fresnel.fr

# Europubhealth European Public Health Master

**Duration:** 2 years

### Course description:

This Master's Course is an integrated two-year Master's course for all those who wish to embark on a career in public health. It is intended to provide students with the analytical tools and conceptual knowledge required of decision-makers in public health. Students will acquire the skills to carry out various professional public health functions at local, regional, national, European and international levels, in both the public and the private sectors. A cross-disciplinary approach to public health issues will be taken, combining the expertise of the participating institutions with the distinct professional environments of the various countries.

The first year of the curriculum covers basic public health issues. It can be attended at Sheffield University (UK) or the Andalusian School of Public Health (Spain). During the second year, students specialise in a particular subject. The seven specialisations offered draw on the strengths of the participating institutions of the consortium. The University of Copenhagen (Denmark) offers training in Quantitative assessment in Public Health, while the Andalusian School of Public Health (Spain) specialises in Health Management and Quality Improvement. The Jagiellonian University of Cracow (Poland) teaches Health Economics and financial management as well as Social and Health Protection, the EHESP School of Public Health (France) explores Environmental and Occupational Health, and the University of Rennes 1 (France) introduces its students to Law, Health and Ethics.

Regardless of their chosen specialisation, each student also carries out research work and a practical placement, and undergoes a viva before a panel of international experts. In addition, two modules will bring together all the students, in France, at the end of each academic year.

The language of instruction depends on the mobility track chosen by each student: English only, French and English, Spanish, French and English, or Spanish and English. All institutions within the consortium will offer practical language courses and Civilisation/Culture courses.

Seventy highly-qualified teachers and researchers are involved in the Course and each year forty students enrol for the programme. The final qualification consists of a double Master's degree awarded by the institutions in which the student has studied. This Master's degree is fully recognised by all the partners within the consortium and by the participating countries. The criteria for eligibility are a Bachelor's degree and proficiency in the languages suitable for the mobility combination chosen. All eligible applications will be examined by a transnational Admission Committee.

Website: http://www.europubhealth.org/

#### Partners:

EHESP School of Public Health, France (Co-ordinating Institution) University of Copenhagen, Denmark University of Rennes 1, France Jagiellonian University, Poland Andalusian School of Public Health, Spain University of Sheffield, United Kingdom

#### Contact:

Laurence Theault
Director of International Affairs
Ecole Nationale de la Santé Publique
Avenue du Prof. Léon Bernard
35043 Rennes, FRANCE
Laurence.Theault@ehesp.fr

# euSYSBIO Erasmus Mundus Master's Course in Systems Biology

**Duration:** 2 years

## Course description:

New measurement techniques in genomics, and in biology more generally, give rise to new forms of data, in ever-increasing quantities. These data demand specialists who understand bioinformatics and data modelling algorithms, and who have the confidence in their own skills and abilities to build new tools when needed. The euSYSBIO programme is therefore designed to give students a solid background in methodological sciences and hands-on experience in modern measurement technologies, so that they can contribute to this rapidly developing field of science and technology.

Deadlines, and detailed admission requirements and selection criteria, will be published on the euSYSBIO web page. Application is through an on-line portal: www.kth.se/eusysbio.

The euSYSBIO programme offers two first-year courses, one from KTH Royal Institute of Technology (Stockholm, Sweden) and one from TKK Helsinki University of Technology (Helsinki, Finland). Both first-year courses have a methodological focus, and are organized by departments of computer and information science at the respective university. The euSYSBIO programme currently offers three second-year courses, one each from KTH and TKK, and one from IST Instituto Superior Técnico (Lisbon, Portugal). The second-year courses are focused on application areas where the respective universites are particularly strong in research, and include a half-year master degree project. A detailed syllabus of all euSYSBIO courses will be available on the euSYSBIO web page.

The partner universities of the euSYSBIO programme offer many possibilities to gain international research experience in high-level research facilities during the two-year programme, and many possibilities for continued study at the PhD level after the programme. Prospective students are encouranged to browse the web pages of the partner universities for more information.

The euSYSBIO programme includes an annual winter conference open to all first-year and second-year students, for specialized lectures, informal contacts and research presentations by the students. The separate courses of the euSYSBIO programme also offer many possibilities for networking in the Stockholm, Helsinki and Lisbon areas and R & D communities.

The euSYSBIO programme charges tuition fees, currently set to 4000 Euro per study year for European students, and 8000 Euro per study year for third-country students. Tuition fees will be payed to KTH, the coordinating institution of the euSYSBIO consortium. Students having their first degree from one of the partner universities (KTH, TKK and IST) will be given a tuition fee waiver.

The euSYSBIO programme offers a number of Erasmus Mundus study grants, and euSYSBIO partner universities also offer a limited number of other study grants at various levels of financial coverage. Prospective students should be aware of that obtaining such other grants may require an additional effort, such as e.g. a separate application process, and may have separate deadlines. For details, please see the euSYSBIO web page.

Website: www.kth.se/eusysbio

#### Partners:

ROYAL INSTITUTE OF TECHNOLOGY, Sweden (Co-ordinating institution) HIGHER TECHNICAL INSTITUTE, Portugal HELSINKI UNIVERSITY OF TECHNOLOGY, Finland

## Contact:

Christina Murray International Office KTH Royal Institute of Technology Drottning Kristinas Väg 6, 10044 STOCKHOLM - Sweden tina@kth.se +46-8-7906550

# FAME Functionalised Advanced Materials and Engineering

**Duration:** 2 years

# Course description:

The Erasmus Mundus FAME Masters course provides a two-year (120 ECTS) education programme in Advanced Materials Science within 7 universities of 4 European countries (Germany, France, Belgium and Portugal) that host world-renowned leading research laboratories in the field of Advanced Materials Science.

Mandatory and optional courses are integrated and taught by distinguished professors and researchers, who already interact closely through the European Research Network of Excellence FAME, launched in October 2004. The Master Course ensures an intensive and innovative training for 15 non-EC students + 25 European students. This Master allows applying for PhD programmes in Europe and/or working as scientist or R&D engineer in industry.

The curriculum consists of three semesters of classes taught in English, plus one semester for the Master thesis in a European research laboratory. The first two semesters are devoted to general topics in the field of functional materials science. The third semester is dedicated to a specialisation in one of the partners' universities which all offer a specific programme related to their particular expertise. It is mandatory to change country at least once during the course programme, so that all students will study in at least two different European countries. The mobility scheme is the following:

- 1st semester in Germany or France: University of Augsburg or INP Grenoble
- 2nd semester in Germany or France: University of Augsburg or INP Grenoble
- 3rd semester in any participant institution with the following specialities:
  - INP Grenoble (F): Materials for Micro- and Nanotechnologies
  - U Augsburg (D): Materials Interfaces: Surfaces, Composites and Coatings
  - U Darmstadt (D): Functional Ceramics: Processing, Characterization and Properties
  - U Aveiro (P): Nanomaterials and Hybrids
  - U Louvain (B): Engineering of Materials and Nanostructures
  - U Liège (B): Nanomaterials and Modelling
  - U Bordeaux (F): Hybrid Materials and Ceramics: Design, Synthesis and Properties
- 4th semester: Master thesis in one of the laboratories of the European Network of Excellence FAME or in related industry.

After achievement of the curriculum, students graduate with a double Master diploma in "Materials Science" awarded by the universities of the Consortium and recognised in each visited country. The admission criteria are highly competitive as this programme addresses students of top leading universities from all over the world. Candidates should hold a BSc (Bachelor in Sciences) or equivalent preferably in the fields of Physics, Physical Chemistry, Chemistry or Materials Science. A sufficient proficiency in the English language is required. Besides usual evaluation of student's records such as GPA's and TOEFL or IELTS, applicants have to explain their goals and interests in coming to Europe for education.

Website: www.fame-master.com/

### Partners:

Grenoble Institute of Technology, France (Co-ordinating institution) Catholic University of Louvain, Belgium University of Liège, Belgium Technical University of Darmstadt, Germany University of Augsburg, Germany University of Bordeaux I, France University of Aveiro, Portugal

## Contact:

Alexis Deschamps
Grenoble University of Technology
1130 rue de la Piscine
BP 75
38 402 Saint Martin d'Heres Cedex, FRANCE
alexis.deschamps@ltpcm.inpg.fr

## Food of Life

Duration: 1 year 10 months

#### Course description:

FOOD OF LIFE is an integrated, cross-disciplinary two-year world-class Masters Course in the science of animal-derived foods. The Course will lead to the award of a double degree. FOOD OF LIFE students will acquire in-depth knowledge in all the relevant animal science and food science and technology aspects of the food production chain. Food is essential to life, and foods of animal origin comprise an essential part of the diet of much of the human population. FOOD OF LIFE students will end the Course extremely well equipped for a career in the food production industries, as these industries face the major challenges set by our increasingly affluent and populous world:

- Increased global requirement for meat and milk products
- Increased emphasis on product quality, proven health benefits for the consumer, improved animal health and welfare and reduced environmental impact

Basic theoretical knowledge, practical technologies, research and development methodologies and social and cultural aspects of the food production chain will all be taught. The acquired knowledge will have relevance to both consumer and production animal health in a European and worldwide context. The education will be provided by four European partner universities (Universitat Autònoma de Barcelona, University of Copenhagen, University of Helsinki and Swedish University of Agricultural Sciences). The 120 ECTS Course will be taught in English and comprise one year (60 ECTS) at each of two of the partners. Students will attend an Introductory Module at the start of Year One and a Summer School at the start of Year Two and these together with monthly web-based Workshops. Journal Clubs and Kitchen Clubs will ensure a strong community aspect to the education, including the possibility to acquire new languages (Catalan, Spanish, Danish, Finnish, Swedish). Students will also have the opportunity of a study period with Associate Partners in North America, United Kingdom, New Zealand and Italy. Study Periods may comprise research courses, laboratory experience or industry experience. The international nature of the education will be enhanced through the involvement of Visiting Scholars from the Associate Partners and elsewhere. The Course will conclude with a 30 ECTS Thesis Project jointly supervised by the two main teaching partners. The component degrees constituting the FOOD OF LIFE Double Degree will be in animal science and/or food science disciplines, depending on the choice of study partners.

Website: www.EMfoodoflife.eu

#### Partners:

UNIVERSITY OF COPENHAGEN, FACULTY OF LIFE SCIENCES, Denmark (Co-ordinating institution)
AUTONOMOUS UNIVERSITY OF BARCELONA, Spain
UNIVERSITY OF HELSINKI, Finland
SWEDISH UNIVERSITY OF ARGICULTURAL SCIENCES, Sweden

## Contact:

Chris Knight
University of Copenhagen
Grønnegårdsvej 7
1870 FREDERIKSBERG C - Denmark
chkn@life.ku.dk
+45 35 33 25 66

# FUSION-EP European Master in Nuclear Fusion Science and Engineering Physics

Duration: 2 years

# Course description:

The aim of this multinational Master's programme is to provide a high-level research-oriented education in fusion-related engineering physics. This Course is closely connected to the research activities in the university partners, and provides a well-integrated language and cultural experience. The seven university partners Ghent University (Belgium), the Royal Institute of Technology (Sweden). Complutense University of Madrid (Spain), Technical University of Madrid (Spain), University Carlos III of Madrid (Spain), University Nancy I Henri Poincare (France), and the University of Stuttgart (Germany) offer great depth and experience in the field of fusion science and engineering physics. These universities provide a genuinely European opportunity for Master's level studies in a field which is of crucial importance to addressing the ever more urgent and vital problem of world energy supply. In view of the expertise of the university partners, the programme offers three different pathways for its students: fusion-oriented Plasma Physics, Computational Methods in Physics, and Instrumentation and Radiation. The programme structure is combined with a mandatory stay at three participating universities in three different countries. Semesters one and two are spent at one university and the third semester at a second institution. Throughout these semesters, topics covered are plasma physics, computational methods in physics, instrumentation and radiation, classical electrodynamics, mechanics of continuous media, and various lab projects. The final semester is spent at a third university while students work on their Master's theses. After the second semester, a summer event is organised in which the mobility and specialisation tracks are organised and students propose their Master's thesis topics.

Courses will be taught in the local language of the university. The joint or multiple degrees awarded by the consortium upon completion are recognised in all the participating countries. Admission criteria include a Bachelor's degree in engineering physics, applied physics, physics or an equivalent degree. Sufficient undergraduate knowledge of classical and modern physics is required, together with the necessary mathematical and computer programming skills. Applicants are subject to a well-defined selection procedure which identifies high quality students.

There exists an Action 3 partnership for European students and researchers between FUSION-EP and the following higher education institutions from third countries: UCLA and University of Wisconsin-Madison (USA); St. Petersburg State Polytechnic University and Moscow Engineering Physics Insitute, (Russian Federation); and University of Science & Technology of China (USTC), Tsinghua University Beijing, and Southern Institute of Physics Chengdu (China).

Website: http://www.em-master-fusion.org

#### Partners:

Ghent University, Belgium (Co-ordinating Institution)
Royal Institute of Technology, Sweden
Complutense University of Madrid, Spain
Technical University of Madrid, Spain
University Carlos III of Madrid, Spain
University of Nancy I Henri Poincare, France
University of Stuttgart, Germany

#### Contact:

Guido Van Oost Head of Research Unit Ghent University J. Plateaustraat 22 9000 Ghent, BELGIUM guido.vanoost@ugent.be

# **GEMMA Master's Degree in Women's and Gender Studies**

**Duration:** 2 years

# Course description:

GEMMA: Master in Women's and Gender Studies is a joint European multidisciplinary programme which provides high quality academic education and professional competencies for students wanting to conduct further research or intending to work in the areas of women's studies, gender studies and equal opportunities.

This European Master is unique in the way it brings together approaches to feminism from all cardinal points in Europe. Created as a result of concerted efforts on the part of several universities working together within the Socrates Thematic Network ATHENA, it brings together the expertise on postgraduate studies of all the institutions involved. In its composition the GEMMA consortium represents the harmonisation of eight different institutions from seven different European countries: University of Granada (coordinator), University of Bologna, Central European University of Budapest, University of Hull, Institutum Studiorum Humanitatis, Ljubljana (ISH), University of Lodz, University of Oviedo and University of Utrecht. GEMMA is thus the fine tuning of North European, South European and Central European higher education institutions where Women's and Gender studies is one of the main elements in their postgraduate offer. The languages used by the consortium universities will be English, Italian and Spanish.

The programme is structured as follows:

- 1. Core Component: 1st semester. (30 ECTS). Taken at host university and organised around the same three courses at all consortium universities: (Feminist History; Feminist Theory; Feminist Methodology)
- 2. Electives/practice/specialisation: 2nd and 3rd semesters (60 ECTS). Divided into:
- Electives cluster A: 2nd Semester. 30 ECTS (at host university)
- Electives cluster B (mobility): 3rd Semester. 30 ECTS (at partner university)
- 3. Master's thesis: 4th semester (30 ECTS credits)

Website: http://www.ugr.es/~gemma/

#### Partners:

University of Granada, Spain (Co-ordinating institution)
University of Oviedo, Spain
Central European University, Hungary
University of Bologna, Italy
Utrecht University, Netherlands
University of Lodz, Poland
ISH Ljubljana Graduate School of Humanities, Slovenia
University of Hull, United Kingdom

# Contact:

Adelina Sanchez INSTITUTO UNIVERSITARIO DE ESTUDIOS DE LA MUJER Edificio Intitutos Rector Lopez Arguëta, s/n 18071 Granada, SPAIN adelina@ugr.es

# GIM MSc in Global Innovation Management

**Duration:** 2 years

# Course description:

Successful management of the innovation process is essential for any business wanting to stay ahead of the competition.

The 2-year MSc in Global Innovation Management (GIM) will equip students with the skills needed to transform research outputs into innovative products and services for worldwide markets. It also provides a unique opportunity to test these skills internationally as part of the study programme.

GIM addresses new challenges in innovative global enterprise and provides:

- A practical and global perspective of Innovation Management
- Skills applicable for larger multinational organisations to smaller enterprises
- Expanded perspectives of Innovation Management including Technology Management, R&D, and Product/Service Development with focus on the interface between disciplines involved in the process;
- Increased research capability focused on activities at the periphery of the innovation process.

All students take a common first year at the University of Strathclyde, then choose either to deepen study at Hamburg University of Technology (Germany), or to apply skills and knowledge in an industrial internship at Aalborg University (Denmark).

# The course is structured as follows:

Semesters 1 and 2 (Year One) provides a strong foundation in the Innovation Management process, with essential practical experience of working within global teams and with an industrial client on product/service development briefs. Strategic technology management, manufacturing business strategy and supply chain management are also a central focus.

Semester 3 at Hamburg looks at early and late phases of the innovation management process. It concentrates on market research for (radical) innovation, cross functional cooperation at the front end of the innovation process, managing innovation projects over geographical and functional/divisional boarders and preparing the market introduction of new products and services.

Semester 3 at Aalborg is an industrial internship providing the students with global innovation management work experience consolidating the knowledge and skills obtained at Strathclyde. Students will deliver a relevant and theoretically supported project to the host Danish company.

In Semester 4 all students take a thesis project supervised jointly between academics at the host institution and another partner institution.

The programme is delivered in English and intended for excellent graduates of first degrees in Engineering, Science and Technology. The MSc award is made jointly by the University of Strathclyde and the second-year institution. Graduates, supported by a network of valuable contacts, enter the international employment market working:

- with enterprises dealing with high end technological products and services
- as consultants making technology assessment and innovation /change management
- with governmental institutes dealing with innovation policy and strategy
- with relevant research and higher education institutions.

Website: www.globalinnovationmanagement.org

#### Partners:

University Of Strathclyde, United Kingdom (Co-ordinating Institution) Hamburg University of Technology, Germany Aalborg University, Denmark

#### Contact:

William John Ion University of Strathclyde 75, Montrose Street G1 1XQ Glasgow, UNITED KINGDOM w.j.ion@strath.ac.uk

# GLITEMA German Literature in the European Middle Ages

Duration: 1 year 10 months

# Course description:

The GLITEMA (German Literature in the European Middle Ages) EMMC is an integrated master course run by a consortium of three full partner universities (Porto, PT [co-ordinator]; Bremen, DE; Palermo, IT), supported by nine associated partner HEIs (Amsterdam, NL; Berlin [FU], DE; Greifswald, DE; Olomouc, CZ; Ljubljana, SI; Moscow [Lomonosov], RU; North Carolina, US; Santiago, ES; Zurich, CH).

The basic premise for the GLITEMA EMMC is the understanding that medieval culture, in order to be fully comprehended, must be analysed from within its wider European context: in particular, the traditional "national philological approach", which has informed Medieval German Studies since their inception during the 19<sup>th</sup> century, does not allow students to understand the full extent to which today's national cultures in Europe have their roots in a common – medieval – past. Thus, this EMMC aims to emphasize the prenational nature of Medieval German Studies and analyse them from within their European context; to this end, the potentialities of trans-national student and staff mobility within the EU will be used to underpin the European approach to the subject.

The course will be taught by staff from the three full partner Universities, assisted by specialists from the associated partner HEIs and by visiting scholars from third countries. The GLITEMA EMMC will deliver double degrees at any two of the three full partner universities through six different course trajectories: these trajectories have been designed to take into account the different academic, cultural and linguistic backgrounds of students from diverse EU and third country backgrounds. Students will thus be offered a relevant set of learning outcomes, appropriate subject-related academic skills and intercultural and linguistic competences.

All trajectories foresee mandatory mobility periods at all the full partner universities with 85 ECTS being awarded at the HEI where the student starts the degree and presents the dissertation (and which is one of the partners to award the Double Degree), 30 ECTS at the second degree-awarding institution and 5 ECTS at the third partner university.

The course trajectories consist of the following elements: a) Introductory / Consolidation Modules (designed to take into account that students enrolled on the GLITEMA EMMC have, at the outset, very different knowledge / skills / competences in the subject area) will be held during the first semester at each of the full partner HEIs; b) Core Modules (Intensive Course, at the end of the first semester; Hub Programme, during the whole of the second semester; Block Seminar, at the beginning of the third semester) will bring all students and staff together, each part being held at one of the three locations; c) Optional / Research Modules and d) Dissertation (on offer at all partner sites), and e) a Work Placement (available only in Bremen).

Since the majority of modules will be taught in German, a good working knowledge of the language (level C1 in Palermo and Porto; level C2 in Bremen) is a pre-requirement; tuition in this language will be offered in Palermo and Porto, while students are also expected to gain linguistic skills in Italian and/or Portuguese through intensive language training programmes. A maximum of thirty students will be selected for the GLITEMA programme; only those candidates who have obtained a good / very good first cycle degree in a relevant area of studies will be eligible for selection.

Website: http://glitema.up.pt

#### Partners:

UNIVERSITY OF PORTO, Portugal (Co-ordinating institution) UNIVERSITY OF BREMEN, Germany UNIVERSITY OF PALERMO, Italy

#### Contact:

John Greenfield University of Porto Faculdade de Letras, Via Panorâmica, s/n 4150-564 PORTO - Portugal jgreenfi@letras.up.pt

# IM in NLP & HLT International Masters in Natural Language Processing and Human Language Technology

**Duration:** 2 years

#### Course description:

The objective of this Masters Course is the production of bilingual or trilingual specialists in computational linguistics and its application. This objective fulfils the requirement of organisations and enterprises who seek Natural Language Processing specialists who are also competent in several languages. The disciplines involved are linguistics, computer science, mathematics and either two or three languages. Moreover, the opportunity exists for interested students within the programme to do a non-assessed placement. The qualification obtained is the degree "International Masters in Natural Language Processing and Human Language Technology". The duration of the course is 2 years. The languages of instruction are those of the country of each partner university (English, French, Portuguese and Spanish).

The study programme covers taught subjects and a research project dissertation in the domain. The taught subjects are organised so that each student obtains the same fundamental knowledge and can obtain more specialised material according to the student's preference for doing either more linguistics or more computing and mathematics. The lectures will be based on fundamentals but will also be in connection with the most recent research and developments in the domain.

Four Universities are involved in the Masters consortium. The student chooses from these, spending one year (2 semesters) in one of the universities, and one year with either two semesters in one other university or a semester in each of two others.

This 5th year university level degree "IM in NLP & HLT" is awarded on the basis of obtaining 120 ECTS, of which 60 ECTS are taught modules and 60 ECTS are the research project dissertation. This dissertation is supervised by members of the teaching staff who are active in research and who also supervise PhD dissertations - all partners of the consortium are associated with university research laboratories. Career prospects exist in research and development. Being both course and research based, the Masters also enables entry into PhD research. The degree to be delivered will be a "multiple degree" recognised by each of the participating universities; in other words, the student will receive a degree from each of the universities in which he or she has studied (3 certificates maximum). All successful students (European and third-country) will be able to receive the same final degree. To be admitted, students must have successfully completed a 3rd year university degree programme or equivalent in a discipline relevant to the Masters' disciplines (linguistics / computer science / mathematics / languages) and have a good level of proficiency in 2 or 3 languages of the consortium countries.

Website: http://mastermundusnlp-hlt.univ-fcomte.fr/index.htm

### Partners:

University of Franche-Comté, France (Co-ordinating Institution) University of Wolverhampton, United Kingdom Autonomous University of Barcelona, Spain University of Algarve, Portugal

### Contact:

Sylviane Cardey-Greenfield Université de Franche-Comté UFR SLHS 30, rue Mégevand 25030 Besancon Cedex, France sylviane.cardey@univ-fcomte.fr

# IMACS International Master in Advanced Clay Science

Duration: 1 year 10 months

# Course description:

<u>Objectives:</u> 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 specialisation in 2 of the following fields:

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

<u>Consortium</u>: IMACS involves 5 universities: the University of **Poitiers** (UP) in France (co-ordinator), the Technical University of **Crete** (TUC) in Greece, the University of **Aveiro** (UA) in Portugal, the University of **Ottawa** (UO) in Canada, and the Federal University of Rio Grande do Sul (UFRGS) (**Porto Alegre**) in Brazil.

<u>Content</u>: 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.

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

<u>Application</u>: The Masters Course is opened to students having acquired a good bachelor degree, and a fluent understanding of the English language.

Website: http://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

# Contact:

Patricia Patrier Mas Université de Poitiers – lab. HydrASA 40 avenue du Recteur Pineau 86022 POITIERS - France patricia.patrier@univ-poitiers.fr

# IMEC International Master in Early Childhood Education and Care

Duration: 1 year 8 months

# Course description:

The objective of International Master in Early Childhood Education and Care ("IMEC") is to establish a competitive European Master Programme to be able to attract students from Third Countries who are now taking this kind of specialisation elsewhere. Its forerunner, EMEC - European Master Programme in Early Childhood Education and Care (developed 2005-2008), is one of the few existing Master programmes in this field in Europe.

This study programme is a two-year full-time Master programme (120 ECTS credits) in early childhood education and care, "IMEC", offered by a consortium of 3 partner universities in Norway, Ireland and Malta. Co-ordinating institution is Høgskolen i Oslo / Oslo University College (HiO).

The programme includes 8 modules and one thesis organised as follows:

1st year of study, 1st semester, in Norway:

Play and Learning (10 ECTS credits)

Aesthetics of Children's Culture (10 ECTS credits)

The Evolution of Early Childhood Research Practices and Policies (10 ECTS credits)

1st year of study, 2nd semester, in Ireland:

Research Methodologies (10 ECTS credits)

Childhood and Children in Contemporary Europe (10 ECTS credits)

Addressing Diversity (10 ECTS credits)

2nd year of study, 3rd semester, in Malta:

Professional Reflection (10 ECTS credits)

Questioning Curriculum and Critical Issues (10 ECTS credits)

Thesis (to be continued in 4th semester)

2nd year of study, 4th semester, in any of the 3 partner countries:

Thesis (40 ECTS credits)

IMEC is delivered on campus. The 3 first semesters will have an introductory week at the new university. Online learning materials and videoconference seminars will support traditional teaching methods such as lectures and supervision. An LMS (Learning Management System) will support oncampus learning.

On successful completion, students will be awarded a joint Master degree (120 ECTS credits) recognised by all 3 partners: HiO, Universitá ta'Malta and Dublin Institute of Technology. Teaching language is mainly English. Norwegian, Maltese and Irish language courses will be offered. IMEC will receive 17 students, whereof 10 from third countries and 7 from EU/EEA countries.

# Admission criteria:

- Bachelor degree or equivalent in or with significant relevance to early childhood education
- Sufficient command of written and oral English
- Computer knowledge and skills

Website: http://www.emimec.eu

#### Partners:

OSLO UNIVERSITY COLLEGE, Norway (Co-ordinating institution) UNIVERSITY OF MALTA, Malta DUBLIN INSTITUTE OF TECHNOLOGY, Ireland

# Contact:

Unni Hagen
Head of Studies/Associate Professor, Faculty of Education and International Studies
Oslo University College
Postbox 4, St. Olavs plass
0130 Oslo - Norway
unni.hagen@lui.hio.no

# IMESS International Masters in Economy, State and Society

**Duration:** 2 years

# Course description:

The International Masters in Economy, State and Society – **IMESS** – is a 2-year, 120 ECTS, integrated Joint Degree MA programme offered by a consortium of outstanding European universities coordinated by UCL, London's leading multifaculty university and one of the top universities worldwide. The consortium comprises University College London (UCL), Corvinus University of Budapest, Charles University, Prague, the University of Tartu, Jagiellonian University, Krakow and Helsinki University. **IMESS** draws on unparalleled expertise from across the consortium to offer *the* definitive Masters course focusing on the economies, states and societies of **Central and Eastern Europe and Russia** (CEE), in comparative and global contexts.

The programme comprises 3 study tracks in the Socio-economic Sciences and Humanities: **Economics & Business**; **Politics & Security**; **Nation, History & Society**. Each track combines specialist electives (economics, politics, sociology, history and culture), research methods training (social sciences or humanities) and language tuition (Czech, Estonian, Finnish, Hungarian, Polish) with an advanced research dissertation of 20-25,000 words. All students spend the first year of the programme at UCL before moving in the second year to a partner university, where the language of instruction continues to be English.

All **IMESS** students will benefit from: the world-leading expertise of the staff delivering the course; innovation in syllabus and teaching; integrated dissertation supervision; the dynamism of the research environment; the opportunity to participate in conferences, seminars and workshops; an IMESS-oriented careers development programme; training in Academic English as well as in a CEE language; the excellence of the consortium's institutional support structures; the programme's interactive virtual learning environment; and the IMESS Alumni Association.

Graduates of the programme will acquire:

- advanced knowledge of the scientific methodologies and tools appropriate to their study track as well as a broader interdisciplinary awareness
- a multifaceted knowledge and understanding of the economies, states and societies of CEE in the context of the wider European and international space
- knowledge and skills in two European languages and intercultural competence
- a skill set suited to entering a career in the private or public sector or for developing a research career in academia

The **IMESS** programme will thus provide an essential flow of European expertise necessary for responding to the diverse research and policy challenges of the twenty-first century.

Website: www.imess.eu

### Partners:

University College London, United Kingdom (Co-ordinating institution) Charles University of Prague, Czech Republic University of Tartu, Estonia University of Helsinki, Finland Corvinus University of Budapest, hungary Jagiellonian University, Poland

# Contact:

Robin Aizlewood UCL-SCHOOL OF SLAVONIC AND EAST EUROPEAN STUDIES Gower Street London WC1E 6BT, UNITED KINGDOM r.aizlewood@ssees.ucl.ac.uk / c.gerry@ucl.ac.uk

# IMFSE International Master of Science in Fire Safety Engineering

**Duration:** 1 year 8 months

# Course description:

The joint programme (EMMC) in Fire Safety Engineering (FSE) establishes a top-level education in Fire Safety Engineering. Students completing the EMMC will be qualified for technical or scientific jobs in the field of FSE and will have a network of contacts in the field.

Currently, the application of fire safety codes and design procedures is evolving from a prescriptive towards a performance-based approach. This evolution is accompanied with an equally drastic transformation of the educational framework and an increase in the number of needed professionals in Fire Safety Engineering.

The three partners (Ghent University, Lund University and University of Edinburgh) build upon their excellence in research and experience with existing educational programmes in FSE to deliver this new EMMC. Each partner has their own expertise. Ghent specializes in the behaviour and modelling of fire and explosions ('general FSE'). Lund is a recognized leader in human behaviour in fires, fire modelling and risk analysis. Edinburgh is the developer of the first curriculum in structural fire safety engineering, with a focus on infrastructure.

The duration of the program is 2 years (120 ECTS credits). The language of instruction is English. The students spend semester 1 and 3 in either Ghent or Edinburgh. All students spend semester 2 in Lund. The fourth term covers the master's thesis, for which one of the three partners will be responsible, although the work can be done in another institute (if appropriate).

All of the involved higher education institutes already provide education in Fire Safety Engineering, each with a world wide reputation of exellence. The partners will deliver a joint degree ('International Master of Science in Fire Safety Engineering', called 'Master (Two Years) of Science in Fire Safety Technology' at Lund University\*.

Applicants should have a Bachelor degree or recognized equivalent from an accredited institution (minimum 3 years full-time study or 180 ECTS credits) in civil engineering, structural engineering, mechanical engineering, material sciences, chemical engineering, chemistry, physics, applied physics, or a related discipline. Other criteria that will be taken into account are awards, TOEFL scores, external references and details of earlier project work.

\*The name 'Fire Safety Engineering' cannot be used in Sweden because it is protected according to Swedish Higher Education Ordinance; this has no practical implications and the diploma is a true joint degree, issued by the three universities).

Website: www.imfse.ugent.be

### Partners:

GHENT UNIVERSITY, Belgium (Co-ordinating institution) UNIVERSITY OF EDINBURGH, United Kingdom LUND UNIVERSITY, Sweden

#### Contact:

Bart Merci
DEPARTMENT OF FLOW, HEAT AND COMBUSTION MECHANICS
Sint-Pietersnieuwstraat 41
9000 GHENT - Belgium
Bart.Merci@ugent.be

# IMHS International Master in Horticultural Sciences

**Duration:** 2 years

# Course description:

The aim of IMHS is to train professional figures able to work in global horticultural markets. The project will provide a top level program that highly qualifies graduates to deal with the challenge of modern horticulture by offering them the instruments to face the rapid changes occurring worldwide.

The strong integration among three leading European universities will provide a wide range of complementary expertise contributing to create a holistic education for the future graduates. The teaching staff will include 28 EU professors and a number of third-country scholars.

The innovative methodology of teaching and planning of the courses, which involve the major stakeholders at local and international level and the student exchanges among the consortium, will offer a tantalizing environment for student education and training

The structure of the programme will take benefit from specific competencies of the partners. By exploiting the research skills and professional experience of the Consortium members, the Master's programme will offer research orientated teaching.

Website: www.imahs.unibo.it

#### Partners:

University of Bologna, Italy (Co-ordinating Institution)
Technical University of Munich, Germany
University of Natural Resources and Applied Life Sciences, Austria

#### Contact:

Guglielmo Costa University of Bologna Viale G. Fanin, 46 40127 Bologna, ITALY guglielmo.costa@unibo.it

# IMIM International Master in Industrial Management

**Duration:** 2 years

# **Course description**

This integrated Master's programme in general management focuses on technology-based industrial and service companies. The overall aim of the programme is to provide science and engineering students with business skills relevant to managerial careers in internationally oriented manufacturing and service industries. The IMIM programme offers a unique possibility to experience the cultural, economic and social life in three or more different European countries coupled with a coherent and unified education in industrial management. The institutions offering the Master's course are the Technical University of Madrid (Spain), the Politecnico di Milano, Milan (Italy), and Royal Institute of Technology, Stockholm (Sweden).

The IMIM programme is a two-year programme over four semesters. During the first semester, which takes place at the Technical University of Madrid, students are provided with an introduction to organisational behaviour, financial and managerial accounting, corporate finance, marketing, strategy and economics. The second semester, which takes place at the Politecnico di Milano, further develops the students' proficiency in operations, quality, and supply-chain management techniques at a strategic, tactical, and operational level. The third semester at the Royal Institute of Technology of Stockholm is comprised of courses in management control, human resource management, industrial project management, industrial marketing and entrepreneurship. During the final semester students will undertake a master thesis in a company, at the University or in an organisation.

The professor-to-student ratio throughout the programme is approximately one to two. English is used in all aspects of the IMIM programme. Students also have the opportunity to learn the local language in order to enhance their cultural experience.

Upon successful completion, students are awarded with a multiple degree, made of the degree from UPM-Spain, the degree from POLIMI-Italy and the degree from KTH-Sweden It should be noted that IMIM has been recognised as a TIME Master Programme by the Top Industrial Managers for Europe (T.I.M.E.).

Applicants to IMIM must have completed a minimum of three years of full-time study in a scientific or technical discipline (corresponding to a Bachelor of Science degree or equivalent). Admission is subject to the approval by the IMIM Committee. Admission criteria are based on educational background, work experience, recommendations, and language skills.

Website: http://www.imim.polimi.it/

#### Partners:

Universidad Politecnica de Madrid, Spain (Co-ordinating Institution) Politecnico di Milano, Milan, Italy Royal Institute of Technology, Sweden

#### Contact:

Felipe Ruiz López Universidad Politécnica de Madrid José Gutiérrez Abascal, 2 28006 Madrid, SPAIN fruiz@etsii.upm.es

# IMMIT International Master in Management of Information Technology

**Duration:** 2 years

# Course description:

Information and information technology (IT) have become an integral part of products and services and an enabler of business processes in an increasingly global economy. As IT becomes embedded in (international) business strategies and processes, the roles of technologists and business managers become increasingly intertwined. IMMIT, the International Master in Management of Information Technology, is designed to prepare students to become effective managers at the interface between Information Systems and business functions in an increasingly international business environment.

IMMIT is delivered jointly by IAE Aix-en-Provence (France), Tilburg University, (The Netherlands) and Turku School of Economics (Finland), which are among the best European institutions in the field of IT management. This is an integrated Masters taught in English and based on the most relevant courses of each institution in order to create a unique programme in International IT management.

Upon completion, students get three degrees: Master of Science in Information Management (recognised in the Netherlands), Master Sciences du Management Spécialité Management et Technologies de l'Information (France) and Master of Science in Economics and Business Administration (Finland). IMMIT lasts 2 years (120 ECTS), and is designed for students with an undergraduate degree in IT or Business / Management.

The programme constitutes four successive phases: 1.Foundations: International Business (France) 2.Skills: IT Management (Finland) 3.Integration: Managing IT for International Business (Netherlands) 4.Thesis: International IT Management Topics (any location in Europe). IMMIT is a European innovation with its uniqueness in offering a European perspective on IT Management in internationally operating organisations. At the same time, IMMIT addresses the differences in culture, geography, time zones, telecommunication infrastructure and country-specific legal frameworks.

Website: www.immit.eu

#### Partners:

Tilburg University, Netherlands (Co-ordinating institution) Turun Scool of Economics, Finland University of Aix-Marseille III Paul Cézanne, France

#### Contact:

Piet Ribbers Tilburg University Warandelaan 2 5037AB Tilburg, NETHERLANDS immit@uvt.nl

# IMMSSET International Master in Materials and Sensors Systems for Environmental Technologies

Duration: 2 years

#### Course description:

IMMSSET is a multidisciplinary Erasmus Mundus Masters Course in Materials and Sensors Systems for Environmental Technologies, designed to prepare highly-qualified researchers and professionals able to develop and implement integrated solutions to environmental problems of industrial processes, with new materials and regulation systems.

IMMSSET is a two-year programme (120 ECTS) jointly offered by the Universidad Politécnica de Valencia (Spain), Kungliga Tekniska Högskolan (Sweden) and Università degli Studi di Bologna (Italy). Students will attend courses in two of these European Universities. Classes will be taught in the national languages and English. Students will also benefit from the well-established research and educational background, and the strong links with industry of the partners.

Candidates must possess an excellent Bachelor degree in Chemistry, Physics or Engineering. Proficiency level of the teaching language of the entrance University is also required. A maximum of 75 students per year will be selected, and distributed between the three Universities, so the best professor/student ratio is guaranted. Admission into the master for both third-country and European students will be decided by a selection committee composed of representatives from each partner institution.

The Masters Course combines three important disciplines that have been traditionally studied separately: industrial process design, materials science and sensors systems, linked by their common relationship with environmental aspects. Initial broad formation is proposed during the first and second semesters (54 ECTS). Various specialization possibilities are offered in the third semester (24 ECTS). Language courses are also integrated in the Masters Course (12 ECTS). A final industrial internship (30 ECTS) or final Masters thesis (30 ECTS) is performed in the last semester in the best industrial or academic environment. The Masters Consortium has a specific colaboration with the Chemical and Biomedical Engineering Department (FSU) where the students could performe their research work.

Different mobility paths are proposed, so that students spend a maximum of three semesters in one university. Successful students will be awarded an official double degree from the two visited universities.

Innovative teaching methods are used to help students to promote life-long learning. The course provides a good preparation for future activities in industries or research projects. PhD studies are also a natural extension of this course.

Website: http://erasmusmimmsset.webs.upv.es

#### Partners:

Polytechnic University of Valencia, Spain (Co-ordinating Institution) Royal Institute of Technology, Sweden University of Bologna, Italy

#### Contact:

Amparo Ribes Greus Escuela Técnica Superior de Ingeniería del Diseño Polytechnic University of Valencia Camino de Vera, s/n 46022 Valencia, SPAIN aribes@ter.upv.es

# IMQP International Master in Quaternary and Prehistory

Duration: 1 year 8 months

# Course description:

The International Master in Quaternary and Prehistory (IMQP) lasts two years (120 ECTS). It is formed of a partnership of six HEIs with multi-annual experience in prehistoric research and formation: Università degli Studi di Ferrara (Italy, coordinator), Muséum National d'Histoire naturelle (France, partner), Universitat Rovira i Virgili (Spain, partner), Instituto Politecnico of Tomar (Portugal, partner), Universidade de Tras-os-Montes and Alto Douro (Portugal, partner) and University of the Philippines Diliman (Philippines, partner). The main subjects of the IMQP educational program are the following: prehistory, anthropology, human palaeontology, chronology, evolution of fauna and flora, archaeometry and Quaternary geology.

The main objective of the Master is to provide an essential knowledge on Prehistory and Quaternary geology by adopting an interdisciplinary approach and exploiting the scientific specialities of each partner Institution.

The IMQP aims at offering a solid education to students for their future professional placement:

- a valuable preparation to the knowledge and use of scientific methods for a cultural and naturalistic approach to the reconstruction of human history;
- good skills to coordinate multidisciplinary interventions;
- an up-to-date, in-depth and interdisciplinary knowledge of research in Prehistory and Quaternary geology through interaction with the most important European institutions involved in research and formation in these fields of study.

The IMQP Consortium grants to students a joint Master degree ("International Master in Quaternary and Prehistory") signed by all partner institutions and giving access to Doctoral schools. Students will enrol at one of the partner institutions which will become their first institution and will be automatically registered at all other institutions of the consortium; they will carry out research/fieldwork/laboratory activities by at least one of the partner institutions other than their first one for a period of at least four months (36 ECTS). The mobility periods will be automatically recognised by all consortium partners. Admission fees for all students amount to 1000 Euros per year.

The IMQP official languages are French and English but courses in the national language of each partner institution will also be organised. These will be compulsory for both students belonging to the first institution and mobility students.

Website: www.unife.it/progetti/erasmusmundus

#### **Partners**

UNIVERSITY OF FERRARA, Italy (Co-ordinating institution)
NATIONAL MUSEUM OF NATURAL HISTORY, France
ROVIRA I VIRGILI UNIVERSITY, Spain
POLYTECHNIC INSTITUTE OF TOMAR, Portugal
UNIVERSITY OF TRAS-OS-MONTES AND ALTO DOURO, Portugal
UNIVERSITY OF THE PHILIPPINES DILIMAN, Philippines

#### Contact:

Carlo Peretto
DIPARTIMENTO DI BIOLOGIA ED EVOLUZIONE
C.so Ercole I d'este 32
44100 FERRARA - Italy
carlo.peretto@unife.it

# IMRD International Master of Science in Rural Development

**Duration: 2 years** 

# **Course description:**

The joint International MSc in Rural Development (IMRD) offers the opportunity to study international visions on Rural Development in their diversity of approaches and applications and to make comparative analyses of EU and non-EU Agricultural and Rural Development strategies and policies. The objective is to train European and non-European students, from developed, developing and transition countries to become specialists in Integrated Rural Development with a focus on socioeconomic and institutional aspects.

To achieve this objective, IMRD brings together scholars from leading universities and research institutes worldwide to expose students to different existing paradigms, visions, approaches and practices for the development of rural areas. By forming a Network of Institutes of Excellence, IMRD builds on excellent competencies in the area of Rural Development, strong links with the professional world and extensive experience in joint training programs for foreign students. The EU academic partners of the joint IMRD are Ghent University (Belgium), Agrocampus Ouest (France), Humboldt University of Berlin (Germany), Wageningen University (Netherlands), Slovak University of Agriculture in Nitra (Slovakia), and University of Pisa (Italy). Furthermore the consortium consists of a network of non-European academic institutes (Affiliated Partner Institutes) located in China, India, South Africa and Ecuador and a number of Associated Partner Organisations for case studies, Internships and Master Thesis research projects.

IMRD is a 2 year Master program (of 120 ECTS) and the diploma awarded is a joint international MSc degree in Rural Development. The course consists of a combination of General and Specialised training modules in technical, economic and social sciences, divided over three study periods, a Case Study or Internship of one month in the summer period and an individual Master Thesis research project in the fourth study period. The main language of instruction is English but optional and elective courses are available in the languages of the host institutes. The program is supplemented with language training and cultural exposure activities.

The program includes a high extent of student and scholar mobility, making it possible to learn from specialists within and outside of Europe. Students need to participate in training modules in at least three different host institutes and can add case work or field experiences in non-European countries to their curriculum.

Website: http://www.imrd.ugent.be

#### Partners:

GHENT UNIVERSITY, Belgium (Co-ordinating institution)
HUMBOLDT UNIVERSITY BERLIN, Germany
AGROCAMPUS OUEST, RENNES, France
SLOVAK UNIVERSITY OF AGRICULTURE IN NITRA, Slovakia
UNIVERSITY OF PISA, Italy
WAGENINGEN UNIVERSITY, Netherlands
UNIVERSITY OF PRETORIA, South Africa
UNIVERSITY OF AGRICULTURAL SCIENCES GKVK BANGALORE, India
ESCUELA SUPERIOR POLITECNICA DEL LITORAL, Ecuador
NANJING AGRICULTURAL UNIVERSITY, China
CHINA AGRICULTURAL UNIVERSITY, China

#### Contact:

IMRD Secretariat
Faculty of Bioscience Engineering
Coupure Links 653
9000 Gent, Belgium
imrd@ugent.be

# IMSE International Master in Service Engineering

**Duration:** 2 years

# Course description:

Many experts see the explosive growth in services as the next major revolution in the world economy. Because service economies continue to expand and powerful digital communications networks - such as the Internet - evolve rapidly, companies are transformed from regional businesses to globally integrated enterprises. The fast growing discipline of services science and engineering is related to service economy growth and the global need for service innovation. Research and education in this field is therefore in high demand. This is in a nutshell why Tilburg University has established cooperation with the University of Stuttgart (Germany) and the University of Crete (Greece) in offering highly-motivated students the International Master in Service Engineering (IMSE).

The multi-disciplinary IMSE programme has been carefully designed at the interface of software service systems and new globe-spanning business processes to prepare students with a background in either business or information technology to become the new generation of service engineers. This full-time English-taught programme totals 120 ECTS credits and needs to be completed within 2 years. After a kick-off summer school in Crete, students spend a semester in Germany, followed by the Netherlands and Greece. The final semester is devoted to thesis work, which includes an internship in an internationally operating company or research institute either inside or outside Europe. Upon completion, students earn a joint Master's degree in Services Science.

IMSE is also delivered in close cooperation with a number of top quality research institutes, such as UC Berkeley (USA), the University of New South Wales (Australia), Tsinghua University (China) and international companies like ForthNet, Software AG, Accenture and PriceWaterhouseCoopers. This not only guarantees a curriculum that incorporates the latest developments in the field of service engineering, but also stresses the global orientation of the programme.

#### **IMSE - In Short**

Name International Master in Service Engineering (IMSE)

Duration 2-year Master's programme

Type Full-time Start August

Title Master of Science in Services Science

Language of Instruction English

Best Preparatory Management, Economics, Business Administration,

Bachelor's Computer Science or Information Systems\*

Core Courses Service Networks, Business Process Management,

Service Composition and Middleware

Teaching Methods Group work, case discussions, action learning, business

simulations, common web-based collaboration platform

Learning Outcomes international service engineering, design of software services,

analysis and optimization of service networks

Course website: www.erasmusmundus-imse.eu

### Partners:

UNIVERSITY OF TILBURG, Netherlands (Co-ordinating institution)

UNIVERSITY OF CRETE, Greece

UNIVERSITY OF STUTTGART, Germany

# Contact:

Willem Jan Van Den Heuvel EUROPEAN RESEARCH INSTITUTE IN SERVICE SCIENCE (ERISS) Warandelaan 2 5000 LE TILBURG - Netherlands W.J.A.M.vdnHeuvel@uvt.nl

# JEMES Joint European Master Programme in Environmental Studies

**Duration:** 2 years

#### Course description:

The Joint European Master programme in Environmental Studies (JEMES) provides an integrated, state-of-the-art technological and management education. The programme is offered by four leading European universities: Hamburg University of Technology, Germany (programme coordinator, engineering technology stream). Aalborg Universitet, Denmark (management technology stream), Universidade de Aveiro, Portugal (engineering technology stream), Universitat Autónoma de Barcelona, Spain (management technology stream).

JEMES interweaves technological and management education, researched-based courses and intensive practical exercises on a high academic level. Students do at least the second semester at one of the four partner universities, to profit from the remarkable local expertise. They start in one stream, do the second semester in the other and then decide in which direction to specialise. While the third semester has a strong focus on the project work, the fourth semester is devoted exclusively to thesis research. JEMES is particular in its interdisciplinary character, the close link between practical and theoretical components, research-based thesis and the "shift of perspective" help the students to develop outstanding skills and prepare them perfectly for their career.

The programme offers access to the unique expertise available at each partner institution and an good student-professor ratio. JEMES provides students with a broad and excellent scientific background in the field and important skills such as teamwork, management of complex environmental processes, analytical competency, and high intercultural awareness. JEMES considers the needs of developing as well as of industrialised countries. A student body of 50% overseas and 50% European students is intended. Language of education is English (TOEFL score of 550 points paper / 213 computer / 79 web-based required).

Duration of the programme is 2 years (120 ECTS). Applicants have to hold a good undergraduate degree with relevance to environmental studies, must submit a personal motivation statement and recommendation letters. Students will obtain a joint M. Sc. degree in Environmental Studies. Graduates will have an extensive overview of new developments and future trends in the area and will enjoy privileged access to prominent enterprises and institutions worldwide.

Website: http://www.jemes.eu

# Partners:

Technical University of Hamburg-Harburg, Germany (Co-ordinating institution)
Aalborg University, Denmark
Autonomous University of Barcelona, Spain
University of Aveiro, Portugal

### Contact:

Wolfgang Calmano TECHNISCHE UNIVERSITÄT HAMBURG-HARBURG INSTITUTE OF ENVIRONMENTAL TECHNOLOGY AND ENERGY ECONOMICS Eissendorfer Str. 40 21073 Hamburg - GERMANY calmano@tuhh.de / daniela.faika@tuhh.de

#### **LCT**

# **European Masters Program in Language and Communication Technologies**

**Duration: 2 years** 

# **Course description:**

The European Masters Program in Language and Communication Technologies (LCT) is designed to meet the demands of industry and research in a rapidly growing area. It offers education and training opportunities for the next generation of leaders in research and innovation. It provides students with profound knowledge and insight into the various disciplines that contribute to the methods of language and communication technologies and it strengthens their ability to work according to scientific methods. Moreover, the students also acquire practice-oriented knowledge by choosing appropriate combinations of modules in language technology, computational linguistics and computer science. The language of instruction is English (default).

LCT consists of Core Modules and Specialised Modules in Language Technology (LT) and Computer Science (CS), complemented by a Project, and a Masters thesis, for a total of 120 ECTS credits. The Language Technology Core Modules (24 ECTS credits) include (a) the Foundational Module, which covers topics such as statistical methods, symbolic methods, cognition, corpus linguistics, text and speech, foundations of Linguistics, (b) the Computational Syntax and Morphology Module, which covers topics such as Finite State Techniques, probabilistic approaches, formal grammars, tagging, chunking, parsing, and (c) the Computational Semantics, Pragmatics and Discourse Module, which covers topics such as Syntax-Semantics Interface, semantic construction, dialogue, ontologies, formal semantics.

The Computer Science Core Modules (24 ECTS credits) include (a) the Data Structures, Data Organisation and Processing Module, covering topics such as algebraic data-types, relational databases, semi-structured data and XML, Information Retrieval (IR), digital libraries, (b) the Logic, Computability and Complexity Module, covering topics such as logic and inference, automata theory, computability theory, complexity theory, discrete mathematics, and (c) the Formal Languages and Algorithms Module, covering topics such as formal grammars and language hierarchy, parsing and compiler design, search techniques and constraint resolution, automated learning.

The Specialised Modules consist of 42 ECTS credits in LT and CS. These modules are based on the specific strengths in research and teaching of the partner institutions. From the 42 ECTS credits of this category of modules, 15 may be devoted to a project. The research masters thesis consists of 30 ECTS credit points.

The integrated study program is distributed among the Free University of Bozen-Bolzano (FUB), the University of Malta (UoM), the University of Nancy 2 (Nancy 2), the Charles University in Prague, Saarland University (UdS; Coordinator), and the University of Groningen (RuG).

Students study at two universities and receive a double masters degree, which is officially recognised by the university authorities of all the partners. The awarded degrees are officially recognised degrees in the issuing countries. The program ensures that all students receive a common education that covers the core topics in LCT, but their specific scientific profile is shaped by the pair of Universities chosen for the first and second year of their studies.

Applicants must satisfy the following study requirements: a Bachelor degree or equivalent in the area of (Computational) Linguistics, Language Technology, Cognitive Sciences, Computer Science, Mathematics, Artificial Intelligence, or other relevant disciplines; non-native speakers submit proof of knowledge of English such as the Toefl certificate (>79/550), or Cambridge Proficiency Exam (pass), or IELTS (>6.5).

Website: http://lct-master.org

#### Partners:

Saarland University, Germany (Co-ordinating institution) Charles University of Prague, Czech Republic University of Nancy 2, France Free University of Bolzano – Bozen, Italy University of Malta, Malta University of Groningen, Netherlands

# Contact:

PD Dr. Valia Kordoni and Prof. Dr. Hans Uszkoreit DEPARTMENT OF COMPUTATIONAL LINGUISTICS AND PHONETICS - COLI PO Box 15 11 50 66041 Saarbrücken, GERMANY kordoni@coli.uni-sb.de / hansu@coli.uni-sb.de

# M.E.S.C. Materials for Energy Storage and Conversion

**Duration:** 2 years

#### Course description:

The M.E.S.C. Master's Course is a two-year programme in materials science and electrochemistry involving five universities in three European countries (France, Poland and Spain). It is run by a number of world-renowned leading research laboratories in the field of energy-related materials. The Course is taught by distinguished professors and researchers, who work closely together in the European Research Network of Excellence known as ALISTORE. The universities offering the M.E.S.C. Master's Course are the University of Picardie Jules Verne, Amiens (France), the University of Toulouse 3 Paul Sabatier (France), the University of Provence Aix Marseille I (France), the Warsaw University of Technology (Poland), and the University of Cordoba (Spain).

The Master's Course is composed of three semesters of classes plus a fourth semester in a European research laboratory working on a Master's Thesis. Students will study in two, three or four different European countries according to their preference. The first semester is spent in France (Marseille or Toulouse), the second in Poland (Warsaw), the third in Spain or France (Cordoba or Amiens) and the fourth in one of the sixteen laboratories of the European Network of Excellence ALISTORE.

Core courses include the basics and fundamentals of electrochemistry, materials science, solid state chemistry and energy storage, materials technology and processing, electrochemical storage and conversion energy, conducting polymers, and synthesis of Nano-Materials. During semesters one and three, students can also choose specialised units to gain deeper insight into areas where the participating universities have world-class expertise. These specialisation topics are applied material science for battery applications (Toulouse, semester 1), materials surfaces and point defects (Marseille, semester 1), Battery technology, assembly, tests and physical analysis (Amiens, semester 3) and Nano-Materials for energy applications (Cordoba, semester 3). The language of instruction for all modules will be English.

The Master's Course will ensure intensive and innovative training for around forty-five international and European students After successful participation in the Course, students will graduate with a multiple Master's degree awarded by the universities of the consortium and recognised in each of the countries visited. Students may go on to pursue further PhD research or work in industrial research and development.

The admission criteria for this Course are highly competitive. Candidates should possess a Bachelor of Sciences, preferably in the fields of chemical engineering, physical chemistry, materials science or electrochemistry. Students' academic records will be rigorously scrutinised and applicants will be asked to explain their goals and interests in coming to Europe.

Website: http://www.u-picardie.fr/mundus\_MESC/

#### Partners:

University of Picardie Jules Verne, France (Co-ordinating Institution) University of Toulouse 3 Paul Sabatier, France University of Provence Aix-Marseille I, France Warsaw University of Technology, Poland University of Cordoba, Spain

#### Contact:

Christian Masquelier Université de Picardie Jules Verne 33, rue Saint-Leu 80039 Amiens Cedex, France christian.masquelier@u-picardie.fr; frederic.bouton@u-picardie.fr

# **MA Human Rights Practice (Erasmus Mundus)**

**Duration:** 2 years

#### Course description:

With the development of the Universal Declaration of Human Rights, the European Convention of Human Rights, and the many human rights documents and treaties that have followed in their wake, human rights have become the dominant international moral code, regulating both how people should be treated by their governments and institutions and, more generally, the agenda of international relations at large. Despite the social, political and philosophical dimensions of human rights, the study of the subject has been dominated by the legal profession. This Masters course, however, takes an interdisciplinary approach that goes beyond the formal legalistic dimensions of human rights, providing necessary insights from anthropology, philosophy, sociology, and political science. In doing so, the course's emphasis is on human rights 'practice'. The 'practice' of human rights, involving activities such as the construction and implementation of rights by different authorities and institutions, the work of NGOs and humanitarian agencies in assessing the enjoyment or violation of human rights and the dissemination of human rights research, is a crucial but often neglected aspect of human rights education.

This course seeks to address this deficiency through a variety of teaching methods in conjunction with placement learning. Indeed, placement learning will be central to the course in this respect and students will be trained in project management and organisational analysis, as well as key intellectual themes of human rights work and social research methods before taking up a practical work placement in a relevant organisation. The rationale for the course is the development of skilled postgraduates who can make a significant contribution to the burgeoning human rights agenda in Europe, and around the world, working with civil society organisations, governments, the public sector and business.

Website: http://www.roehampton.ac.uk/international/erasmusmundus/

### Partners:

Roehampton University, United Kingdom(Co-ordinating institution) University of Tromso, Norway Gothenburg University , Sweden

#### Contact:

Dr. Gregory Kent
ROEHAMPTON UNIVERSITY
Southlands College, Roehampton Lane
UK-London SW15 5SL, UNITED KINGDOM
G.Kent@roehampton.ac.uk

# MA LLL European Master's in Lifelong Learning: Policy and Management

**Duration:** 2 years

# **Course description:**

The MA LLL is a flexible, multi-site programme based on a personal Learning Agreement with each student. The participating universities are the School of Education, Aarhus University, Copenhagen Campus (Denmark), the University of Deusto, Bilbao (Spain) and the Institute of Education, University of London (UK). Students will begin the course in either Denmark or the UK (two semesters), and all students will spend their third semester in Spain. Students may choose at which of the three institutions they will spend their fourth semester while writing their dissertation. A third mobility track – available for self-funding students only – comprises a first semester in Bilbao, the second and third semester takes place in London or Copenhagen with the possibility to complete the fourth semester in either Denmark, Spain or the UK.

This Master's Course aims to train professionals to design and develop educational policies concerned with Lifelong Learning (LLL). Graduates of this Course will be able to promote innovative LLL systems that are suited to the social and organisational context in which they are undertaken. Students will develop the competences required to mediate between the educational community and the needs of the local environment. They will learn to advise organisations on the planning, implementation, evaluation, supervision, and control of training mechanisms in LLL.

The Course will develop students' familiarity with the theories, methods and perspectives of transnational and comparative education, learning, and LLL. Students will learn techniques for recognising diverse learning needs (depending on age, gender, aptitude, socio-cultural conditions, etc.) and for identifying the appropriate educational actions to meet these needs. They will be able to design and develop flexible learning paths using the European Credit Transfer System, recognition of prior learning, ICT and e-learning. They will also develop systemic competences related to management, quality, creativity and leadership. With these skills, students will be able to participate actively in the new developments and reforms taking place in Europe through the Bologna and Copenhagen processes.

The language of instruction is English and the course involves around sixty students. The professor/student ratio is approximately 1 professor to every 10 students. Students are awarded a double or multiple degree which is recognised by all consortium partners. A joint degree is awarded where national legislation allow it. Applicants to the Master's Course must have a good first degree (in the humanities or social sciences) or an equivalent qualification, and a satisfactory level of spoken and written English.

Website: http://www.dpu.dk/malll

#### Partners:

The Danish School of Education, Aarhus University, Denmark (Co-ordinating Institution) University of Deusto, Spain Institute of Education, University of London, United Kingdom

# Contact:

Søren Ehlers The Danish School of Education Aarhus University Tuborgvej 164 DK-2400 Copenhagen, DENMARK ehlers@dpu.dk

# MACLANDS MAster of Cultural LANDScapes

**Duration:** 2 years

# Course description:

The Universities of Saint Etienne (France, coordinator), Stuttgart (Germany) and Federico II of Naples (Italy) are offering a two-year Master programme entitled Master of Cultural Landscapes (MaCLands).

The objective of this Master is to educate students in the fields of sustainable preservation, management and development of cultural heritage. With its scientific, technical and conceptual contents, through its innovative methodology and its research in the field, MaCLands will train potential skilled experts and adaptable practitioners in analysis, management and preservation (preventive and curative) as well as designers of overall and sustainable solutions on Town and Country planning issues for cultural heritage.

There are many potential professional prospects for the students as consulting on management and promotion, projects setting for territories, sites and monuments, engineering on memory and cultural heritage, cultural economy, preservation of cultural heritage, communication, research.

30 students are expected within this Master course. Applicants should have a Bachelor degree (i.e. 180 ECTS) in the European LMD system, or equivalent, in Town and Country Planning, Humanities, Architecture, Engineering, Design, Art, History of Art or other equivalent subjects.

Courses will be taught in national languages. Therefore the programme is intended for students with a very good knowledge of French (DALF C1 level), Italian (CELI 3 level) and German (ZD level). They are structured according to the ECTS with 120 credits (30 ECTS per semester).

Mobility track is defined according to the main role and competences of the partners:

- the first semester will be devoted to foundation courses on cultural heritage and preservation in Saint Etienne
- in the second semester, students will be in Naples to learn how to set up and carry out projects on town and country planning
- the University of Stuttgart will welcome students for the third semester: courses on development and communication on projects, concepts and virtual heritage will be taught
- the last semester will take place in one of the members of the Consortium. This choice is made by students. Under the supervision of an academic advisor the fourth semester is devoted to internships or a Master thesis.

Students will be awarded a multiple degree from the three partners of the MaCLands consortium.

Website: www.maclands.fr

# Partners:

University Jean Monnet of Saint Etienne, France (Co-ordinating institution) University of Stuttgart, Germany University of Naples Frederico II, Italy

#### Contact:

Thomas Guillobez University Jean Monnet of Saint Etienne 21 rue Denis Papin 42023 Saint Etienne Cedex 2, France thomas.guillobez@univ-st-etienne.fr

# MAIPR Master of Arts in International Performance Research

Duration: 1 year 4 months

# Course description:

The Erasmus Mundus Masters Programme in International Performance Research (MAIPR) is a sixteen-month international course that develops a conceptual analysis of the global context of contemporary performance practices, highlighting a variety of European perspectives as well as scholarly and performing arts traditions. It aims to equip students with intellectual and creative skills adequate to conducting international research, enabling them to operate as well-trained scholar-artists in an international arena in professions ranging from academic to practical performing arts. International performance' is twofold: it indicates the objects of analysis, but also an epistemological lens that treats culture neither as an object, nor as a text, but as processes, events and enactments. International performances are perceived as embodied practices and scenarios that are rehearsed every day in the public sphere and sedimented in historical processes: citizenship, gender, ethnicity, habits, corporeal practices.

Funded by the European Commission, the course is offered by three internationally renowned academic institutions: the University of Warwick (UK); the University of Amsterdam (Netherlands); and the University of Tampere in co-operation with the University of Helsinki (Finland). Students study at two of these institutions, and conduct fieldwork and arts research in one or more of these nations. The first term/semester is spent at a designated home institution and the second at one of the other partner institutions. The course is designed around an integrated set of five research questions:

- What does "international," "global," "transnational," or "cosmopolitan" signify when coupled with performance or performance contexts? What vocabulary (words and images) most satisfactorily suits the characteristics of performance? How will research outcomes differ if starting from different conceptual frameworks?
- How are performances linked to global networks and transnational flows of capital? What is the place of global markets in shaping performance practices now? What does theatre tourism (to festivals for example) contribute or take away from local cultures?
- What are the roles of the theatre and performance curator in the new globalised economy? How might the tasks of creative curatorial collaboration in cross-cultural projects be reconciled with entrepreneurial responsibilities to the global marketplace? Is a future amalgam possible between international commercial imperatives for high quality artists and ethically weighted appeals to a sense of socio-political responsibility and commitment?
- What is the responsibility of a European artist or scholar when commenting on performance traditions, history, or actual performances of former colonies or developing nations? What habits of European thought might affect, interfere with or distort the objects of study or of creation? What special European viewpoints or histories might uniquely contribute to the enterprise?
- How does theatrical communication function in response to issues of translation and transculturation? Is language offset by enactment and other performance signifiers, such as the body? What constitutes linguistic competency for world theatre?

Website: http://www2.warwick.ac.uk/fac/arts/theatre\_s/postgraduate/maipr/

# Partners:

University of Warwick, United Kingdom (Co-ordinating Institution)
University of Amsterdam, Netherlands
University of Tampere (in co-operation with The University of Helsinki), Finland

#### **Contacts:**

Janelle Reinelt
MAIPR Programme Director
University of Warwick
Millburn House
COVENTRY – CV4 7HS, United Kingdom
j.reinelt@warwick.ac.uk

Lindzey Mullard
MAIPR Programme Administrator
The University of Warwick
Millburn House
COVENTRY – CV4 7HS, United Kingdom
maipr@warwick.ac.uk

# MaMaSELF Master of Materials Science exploiting European Large Scale Facilities

**Duration:** 12 months

# Course description:

MaMaSELF is a one year European Master course in Materials Science, offered by four Universities: Rennes1 (France), Torino (Italy), TU München (Germany) and the LMU München.

The objective of the course is to teach Materials Science, completed by a two weeks summer school, dedicated to explore materials with neutrons and synchrotron radiation.

#### First semester:

lectures and laboratory courses at one of the four Universities. Specialisation areas are:

- · physics of materials and geochemistry at Munich,
- chemistry and nanoscience at Torino and
- Materials Science combined with Management lectures at Rennes.

#### Second semester:

Master thesis work at another University or partner institutions of the consortium. Master thesis subjects concern research activities of the research groups of the consortium, in collaboration with large scale facilities and industrial partners.

During the two weeks summer school all students will obtain a wide background exploring materials with neutrons or synchrotron radiation. State of the art of the experimental beamline set-ups of spectrometers and diffractometers at synchrotron sources, nuclear reactors as well as on spallation sources will be introduced for different applications.

All lectures will be given in English. Students will receive a double Master degree in Material Science delivered by two out of the three Universities, giving direct access to further PhD studies. Several important European Large Scale Facilities (ESRF and ILL (Grenoble, France), LLB Saclay, France), DESY (Hamburg, Germany) and FRM-II (Munich, Germany)) strongly support this Master and will be implied in the summer school and the Master thesis.

Admission criteria are a successful 1st year Master course (or equivalent) in Materials Science or related areas (chemistry, physics, etc.), together with a proficiency level of scientific English. (TOEFL550/213, IELTS6.5, or eq.). The Master is limited to a maximum of some 40 students per year.

Website: http://etudes.univ-rennes1.fr/mamaself

#### Partners:

University of Rennes I, France (Co-ordinating institution) Ludwig-Maximilians University of Munich, Germany Technical University of Munich, Germany University of Turin, Italy

### Contact:

Dr. Werner Paulus UNIVERSITE DE RENNES I MAGISTERE MATERIAUX CAMPUS DE BEAULIEU, BAT 10B 35042 Rennes, France werner.paulus@univ-rennes1.fr

# MAPNET Masters on Photonic Networks Engineering

**Duration: 2 years** 

# Course description:

The International Masters on Photonic Networks (MAPNET) is focused on the competence related to the generation, manipulation, transport and detection of signals exploiting photons as a support to convey information. This area is currently recognized as one of the most significant within Information and Communication Technologies (ICT) and the enabling architectures for the future Internet. In fact, the increasing quantity and importance of data exchange and relevant services in next generation Internet requires to utilize in an efficient manner advanced technologies such as data transport over optical fibers. MAPNET is a full-time programme offered by: Scuola Superiore Sant'Anna (SSSUP) acting as Coordinator, Aston University (ASTON), Technische Universität Berlin (TUB), Osaka University (OSAKA), and as Associated Members, Ericsson Research, Deutsch Telekom, Mistubishi Electric Corporation, Fujitsu Laboratories Ltd, National Institute of Information and Communications Technologies (NICT). All these institutions have a long-standing tradition in Photonic Networks, and each university has a local pre-existing related Master program.

The Master's program consists of 120 ECTS (two academic years, divided into four semesters). Each semester allows 30 ECTS to be gained. The first three semesters are based on traditional courses, lab exercise and laboratory sessions, while the last is based on independent work related to the Masters thesis. See all details as well as admission requirements and degrees awarded at http://mapnet.sssup.it

# Mobility options and study program

Numerous different mobility paths are envisioned depending on the mobility options selected and the modules taken by the prospective students. The first year of the Masters will be spent in the same institution. Each partner will offer a propaedeutic pool of fundamental courses for the first semester of the Masters programme. This semester will cover advanced topics in maths, physics, statistics, systems and programming. Each partner will also offer a pool of fundamental courses specific to the curriculum chosen in the second semester of the first year. The pool of courses selected in the second semester is oriented to the support of the area to be studied in the mobility period and becomes the basic root of the Masters curriculum. The third semester of the Masters will be spent in a different institution, while the Masters thesis can be done in any of the Masters partner institutions. The third semester will cover specialisation courses in view of the independent project developed during the last semester and will be reported in the Masters thesis. For each year a maximum of 5 students is envisioned for enrolment in each institution.

#### Language of study

English will be the working language of the Masters Course. Every official aspect of the MAPNET course will be dealt with in English, starting from the use of a common language for communication and document exchange. This is the first pillar of the MAPNET language policy. English proficiency is in fact considered a fundamental asset within the admission process and is also the world working language in the field. The second pillar is language learning. In order to improve the linguistic skills of the students selected the opportunity to learn a second European language will be compulsory.

Website: http://mapnet.sssup.it

#### Partners:

SANT'ANNA SCHOOL OF ADVANCED STUDIES, Italy (Co-ordinating institution) OSAKA UNIVERSITY, Japan ASTON UNIVERSITY, United Kingdom TECHNICAL UNIVERSITY OF BERLIN, Germany

### Contact:

CENTRE OF EXCELLENCE FOR INFORMATION, COMMUNICATION AND PERCEPTION ENGINEERING
Giancarlo Prati / Piero Castoldi
Via G. Moruzzi 1
56124 PISA – Italy
giancarlo.prati@sssup.it / piero.castoldi@sssup.it

# Master International Vintage, Vine, Wine and Terroir management

**Duration:** 2 years

### Course description:

Aims: This Master's programme aims to develop internationally trained experts in the wine sector, with a double competency. From the study of wine terroirs to the analysis of consumer behaviour, the comprehensive curriculum combines scientific, technological, economic, organisational and marketing knowledge with field experience. The teaching is based on the scientific reliability of the consortium's teams (full-time lecturers working in research, laboratories of international repute) and is closely linked with the professional world. The continuous changes and globalisation of the wine market have resulted in new needs for the wine industry. The International Vintage Master's degree aims to train flexible and innovative executives and top managers with the necessary skills to play an active part in the enhancing of wines from the technical, strategic and commercial points of view at an international scale. Graduates of the Course will be employable at a manager level in European and international companies dealing with the wine sector, or can go for a PhD.

Duration: 4 semesters, 120 ECTS

**Teaching Languages**: 50% French, 50% English. Students will also acquire a second foreign language (Spanish, Italian, Portuguese, French, English).

**Involved countries**: France, Italy, Spain, Portugal, Hungary, Romania, Switzerland, Chile, South Africa, Greece

**Content**: 9 core modules are offered in at least 3 countries (which change each year depending on the rotation established by the Course committee). 1) Applied languages in the wine sector (2 European languages, 5 weeks, 10 ECTS), 2) European viticultural "terroirs" (3 weeks, 6 ECTS), 3) International wine economics, and organisation of the wine sector (6 weeks, 12 ECTS), 4) Wine marketing (6 weeks, 12 ECTS), 5) Viticulture (6 weeks, 12 ECTS), 6) International study trip (3 weeks, 8 ECTS), 7) oenology (9 weeks, 22 ECTS, 8) preparation of the professional project (4 weeks, 8 ECTS), 9) 6 months internship and thesis (professional project, 30ECTS)

The thirty students accepted each year benefit from an individualised tutorial programme. Non-European students study in at least 3 European partner institutions; European students' programme includes mobility to a Third country institution of the consortium.

**Degrees awarded**: National Degree of Master in France, Spain, Hungary, 2 Italian university Masters of First Level, Portuguese and Romanian master degree. Each student having passed all the modules obtains the French degree jointly awarded with 3 partner institutions of the consortium and 1 to 3 doubles degrees according to the mobility path.

**Application** criteria include a Bachelor of Science including economical sciences and competency in the 2 teaching languages. The applications will be examined by a committee of selection. The selection process will include an interview with the candidates (possibly by telephone) whose paper application has been selected.

Website: http://www.vintagemaster.com/

#### Partners:

HIGHER AGRICULTURAL EDUCATION INSTITUTE (Groupe ESA) OF ANGERS , France (Co-ordinating institution)

STELLENBOSCH UNIVERSITY, South Africa

DE CHANGINS ENGINEERING SCHOOL, Switzerland

PONTIFICAL CATHOLIC UNIVERSITY OF CHILE, Chile

UNIVERSITY OF TRAS-OS-MONTES AND ALTO DOURO, Portugal

UNIVERSITY OF BOLOGNA, Italy

CATHOLIC UNIVERSITY OF THE SACRED HEART, Italy

CORVINUS UNIVERSITY OF BUDAPEST, Hungary

TECHNICAL UNIVERSITY OF VALENCIA, Spain

UNIVERSITY OF AGRICULTURAL SCIENCES AND VETERINARY MEDICINE, BUCHAREST,

Romania

# Contact:

Chantal MAURY 55, rue Rabelais - BP 30748 49007 ANGERS - France c.maury@groupe-esa.com

### **MATHMODS**

# Mathematical Modelling in Engineering: Theory, Numerics, Applications

**Duration: 2 years** 

# **Course description:**

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 business innovation departments. The proposed programme reflects this multidisciplinarity, drawing on the unifying mathematical aspects from the various and often separate engineering disciplines. This allows the development of an essentially unified methodological approach to modelling and simulation of real engineering challenges. The consortium is coordinated by the University of L'Aquila in Italy (UAQ) and involves other four leading institutions in Europe: the University of Nice - Sophia Antipolis in France (UNSA), the Autonomous University of Barcelona in Catalonia (UAB), the University of Hamburg in Germany (UHH) and the Gdansk University of Technology in Poland (GUT). The language of the course will be exclusively English. An introduction to local culture and language will also be offered to the students in each semester. Admission will be restricted to 60 students. The students to professor rate will be approx 2. The MathMods Master's degree course will be given in four semesters. Each semester will total 30 ECTS credits. Mobility scheme will provide for at least two locations. The first year will be common for all students. This will guarantee an equal knowledge platform for all of them. The second year will be divided into five tracks, which reflect the partners' field of excellence. Students will spend their fourth semester on writing their Master's Thesis.

### SUMMARY AND STRUCTURE OF THE STUDY PROGRAMME

First semester: Theory (UAQ)

- Functional analysis in applied mathematics and engineering
- Control systems
- Dynamical systems and bifurcation theory
- Fluid dynamics
- Applied partial differential equations (PDEs)

### Second semester: Numerics (UNSA)

- Algorithms and data structures
- Numerical approximation of PDEs by finite differences and finite volumes
- Numerical methods for PDEs
- Optimization
- Training in industry

# Third semester: Applications

- UAB: Stochastic modelling and optimization
- UAQ: Modelling and simulation of electronic devices
- GUT: Advanced computational methods in material science
- UHH: Modelling, simulation, and optimization of complex systems
- UNSA: Mathematical modelling applications to biology and finance

Fourth semester: Thesis (UAB / UHH / UAQ / GUT / UNSA)

ADMISSION CRITERIA

Applicants are expected to have an excellent university record, with at least 3 years of prior studies (corresponding to 180 ECTS) and with major in one of the following fields: Applied Mathematics, Physics, Engineering or equivalent qualification. Satisfactory level of spoken and written English will be TOEFL 550 or equivalent.

Website: http://www.mathmods.eu

#### Partners:

University of L'Aquila, Italy (Co-ordinating Institution) University of Nice - Sophia Antipolis, France Autonomous University of Barcelona, Spain Gdansk University Of Technology, Poland University of Hamburg, Germany

# Contact:

Bruno Rubino
Department of Pure and Applied Mathematics
University of L'Aquila
Via Vetoio 1
67010 Coppito, L'Aquila, ITALY
rubino@univaq.it

# MBIO Master of Bioethics

Duration: 1 year

# Course description:

This particular Master's programme has existed since 1998 and is organised by Radboud University Nijmegen (the Netherlands), the Catholic University of Leuven (Belgium) and the University of Padova (Italy) in collaboration with the Fondazione Lanza.

The main objective of the Master of Bioethics is to train highly qualified students for research work or professional activities in the interdisciplinary field of bioethics, a field that is increasingly confronted with different moral questions and dilemmas. It approaches bioethics from an international perspective, paying special attention to European philosophical and theological traditions in this area. It has a wider theoretical perspective than the analytical, applied ethics approach dominant in the Anglo-Saxon tradition. Themes such as personalism, communitarianism, hermeneutic ethics, social ethics, and empirical work in ethics will be strongly emphasised. Philosophical and theological theories about the concept of person, the human body, solidarity, the meaning of life and death, care, goals of medicine, and the technological imperative will also underpin study.

Complementing these theoretical perspectives, the programme has a strong interdisciplinary character, directing its ethical reflection toward specific areas. Attention is also focused on the clinical and practical health care settings in which ethical issues arise.

The Master of Bioethics takes one year, during which students study for an equal period of time at the three participating universities. Each university offers courses on the basis of its own approach and expertise, in such a way that students can benefit from different cultural and scholarly traditions. The language of instruction is English, and the programme has an excellent professor / student ratio (4 professors to every 3 students).

Successful students will receive a joint degree diploma signed by the rectors of the three participating universities. Only holders of a Master's degree will be accepted to the programme. Applicants should have a proven competency in English, and have had education, experience or involvement in the field of health care or bioethics. Academic results, training, professional activities and publications will all be taken into consideration in the assessment of the applicants.

Website: http://www.masterbioethics.org

### Partners:

Catholic University of Leuven, Belgium (Co-ordinating Institution) Radboud University Nijmegen, Netherlands University of Padua, Italy

#### Contact:

Paul Schotsmans Catholic University of Leuven Kapucijnenvoer 35/3 – box 7001 3000 Leuven, BELGIUM Paul.Schotsmans@med.kuleuven.be

# MCEMESV Master Conjoint Erasmus Mundus en Etude du Spectacle Vivant

**Duration:** 2 years

# Course description:

With the Erasmus Mundus program, the seven partners (universities of Belgium, Germany, France and Spain) capitalize on the experience acquired through the European Joint Master in Performing Arts founded in 2005. Their aim is to gather the most prominent specialists in Performing Arts and to provide an intercultural approach mostly to theatre, dance, but also to circus, opera and street performances. Their aim is also to encourage the emergence of a specific and original curriculum through four interdisciplinary sections, namely theoretical/intercultural and practical/professional domains.

The "Erasmus Mundus Joint Master in Performing Arts" qualifies the students for occupations in performing arts related to practice, creation, analysis, theory, education, organisation and various branches of the professional field.

The two-year-Master requires the following languages:

- French in Paris, Nice and Brussels
- Spanish in Seville and La Coruna
- English in Copenhagen
- German in Frankfurt

Students must have completed a university (or equivalent) program of 180 ECTS or attest to an artistic or professional experience that will be evaluated by the jury of the consortium.

Each student can personalize his/her program according to his/her objectives which have to be detailed in the application.

Firstly, students choose one first-year-university (60 ECTS: methodological background, study of cultural traditions and management, interdisciplinary approaches) among the following universities:

- Brussels - Nice - Paris - Frankfurt

Each university offers distinct, yet well connected elements of the curriculum.

Students have to be enrolled in this first-year university.

Second, students choose one or two universities according to the specific (theoretical or practical) fields that they want to major in: semiotic or anthropological studies, creation, production, staging, training courses, etc. The final term is devoted to the completion of the final dissertation or project. The Master consists of theoretical lectures, seminars, training courses, workshops, contacts with professionals and institutions and a final dissertation/project. The purpose is to give students the opportunity to gain insight into performing arts shows, their identity, roots and transformations in a changing society, with special emphasis on the European context. The program aims at providing the students with a variety of tools related to the creation and production of, as well as the critical approach, to a contemporary performance. The historical, psycho-social, anthropological, aesthetic and semiotic contexts are particularly taken into account.

Each university is specialized in a particular field:

- Brussels: semiotics and performing arts
- Nice: performance and dance
- Paris: anthropology and cultural studies
- Frankfurt: dramaturgy (practice)
- Sevilla: text and staging
- La Coruna: performing arts education, scenography
- Copenhagen: dance, theatre and performance

Website: http://www.spectacle-vivant.eu; http://performingarts-mundus.eu

#### Partners:

Free University of Brussels (ULB), Belgium (Co-ordinating Institution) University of Paris 8 Vincennes- Saint-Denis, France Johann Wolfgang Goethe University of Frankfurt, Germany University of Copenhagen, Denmark

University of La Coruna, Spain University of Nice Sophia Antipolis, France University of Seville, Spain

### Contact:

André Helbo Free University of Brussels Avenue F.D. Roosevelt 50 CP 123 BE-1050 Bruxelles, BELGIUM ahelbo@ulb.ac.be

### ME3

# European joint Masters in Management and Engineering of Environment and Energy

Duration: 2 years

#### Course description:

The European joint Masters in Management and Engineering of Environment and Energy (ME3) offers a unique education to future engineers and managers able to solve environmental and energy challenges through an integrated approach, combining technological development and innovations together with the consideration of human, social and economic constraints.

The ME3 Master is a well-balanced and inter-disciplinary programme which brings together: firstly Management and Process Engineering; secondly Energy and Environment, and thirdly European and third-countries collaborations. All these aspects constitute the "raison d'être" of the ME3 consortium.

The programme duration is 2 years. The first 18 months are mainly devoted to academic learning, acquisition and consolidation of knowledge and skills. During the last 6 months, students perform a professional project in a company or in a research institute. Language of instruction is English.

The study programme carries 120 ECTS, divided into the following parts:

- Part 1: Foundations of Management 30 ECTS Sept. to Feb., in UPM (Universidad Polytecnica de Madrid), Spain.
- Part 2: Environmental Process Engineering 30 ECTS March to July, in EMN (Ecole des Mines de Nantes), France.
- Part 3: Option 30 ECTS Sept to Jan. Students may follow either:
  - option 1: "Sustainable Energy Engineering" in KTH, Sweden; or
  - option 2: "Rational Design and Use of Energy Technologies" in EMN, France
- Part 4: Professional project in industry or in research 30 ECTS Feb. to July.

The ME3 Masters Course is open to candidates, who have a high degree of proficiency in English. Knowledge of French, Spanish or Swedish is a plus. They should hold a Bachelor's degree in science and engineering (preferentially Chemical, Mechanical, Environmental...).

#### Websites:

http://www.mastereurope-me3.org http://www.mines-nantes.fr/en/Study/Master-of-Science

#### Partners:

Ecole des Mines Graduate School of Engineering, France Technical University of Madrid, Spain Budapest University of Technology and Economics, Hungary Royal Institute of Technology, Sweden Queen's University Belfast, United Kingdom

#### Contact:

Florent Chazarenc
ECOLE DES MINES DE NANTES
DEPARTMENT OF ENVIRONMENT & ENERGY
4 rue Alfred Kastler - la Chantrerie - BP 20722
44307 Cedex 3 Nantes, France
florent.chazarenc@emn.fr

# MEDEG Economic Development and Growth

Duration: 1 year 6 months

### Course description:

The Erasmus Mundus Master Course in "Economic Development and Growth" (MEDEG) is jointly organized by the University Carlos III Madrid (Spain), the University of Warwick (UK) and the Lund University (Sweden). MEDEG is a two-year full-time programme of 120 ECTS and offers an innovative curriculum in the field of economic development and growth, by combining a top-class education in economics and economic development with a special focus on long-run growth dynamics and the role of institutions.

Students are required to study in at least two of the consortium universities. The first year, spent either at Warwick or Carlos III Madrid, is based on a range of common core courses in economics, econometrics and economic development. They include basic courses of economic theory (micro, macro, international economics) and quantitative methods, and extensive and comprehensive training in Development Economics and Economic Growth. Specialization starts in the second part of the first year with a range of courses on micro- and macro-topics in economic development, growth and convergence in the long run, labour markets in developing economies, poverty and inequality measurement, economic development in Latin America, and financial systems in developing economies among others. Specialization is completed during the second year at Lund, with courses on comparative analysis of economic change, demographic change and living standards, economics of innovation in developing countries, migrations among others. At the end of both the first and second year students are required to write a final dissertation with substantial research content. Each student is assigned a personal tutor and carries out his/her final dissertation under the guidance of a supervisor.

The basic teaching language is English but students studying at Carlos III Madrid will receive part of the courses in Spanish. MEDEG also organizes annual workshops in which students and instructors are joined by experts in economic development to discuss major research and policy issues.

The annual intake is around thirty students. The partner universities award a double degree (Warwick+Lund, or Carlos III Madrid+Lund) to successful students. The programme also offers a comprehensive student service package, including insurance and welfare services, cultural programmes (including language courses), social activities and assistance with housing.

Applicants must have a first university degree, equivalent to bachelor level, in economics or related disciplines (economic history, business administration). Graduates in other disciplines but with a sufficient background in economics and quantitative methods are also eligible. Applicants must be proficient in English, computer literacy and have a good command of statistical methods.

MEDEG will give students with high academic and professional potential, coming both from the EU and Third-countries, the opportunity to specialize in an exciting area of economic studies and spend two years in an international academic environment oriented towards the promotion of research and professional excellence. Students educated and trained at MEDEG should expect to be recruited by national and international institutions working on economic development and poverty eradication, such as the European Union, OECD, ILO, World Bank, UNESCO, WTO, CEPAL, IADB (Inter-American Development Bank), as well as by NGOs, governments and central banks, think-thanks and multinational companies. Students oriented towards academic research can be admitted to the Doctoral Programmes of the partner institutions

Website: http://www.uc3m.es/portal/page/portal/postgraduate studies/masters/complete listing

# Partners:

UNIVERSITY CARLOS III OF MADRID, Spain (Co-ordinating institution) UNIVERSITY OF WARWICK, United Kingdom LUND UNIVERSITY, Sweden

#### Contact:

Stefano Battilossi
DEPARTAMENTO DE HISTORIA ECONOMICA E INSTITUCIONES
UNIVERSITY CARLOS III MADRID
c/ Madrid 126
28903 GETAFE - Spain
stefano.battilossi@uc3m.es

#### **MEEES**

### Masters in Earthquake Engineering and Engineering Seismology

Duration: 1 year 6 months

# Course description:

The MEEES (Masters in Earthquake Engineering and Engineering Seismology) programme involves 4 participating institutions: the ROSE School of the Institute for Advanced Study Pavia (Italy), the University Joseph Fourier - Grenoble 1 (France), the University of Patras (Greece) and Middle East Technical University (Turkey).

The main goal of this Masters course is to provide a multi-disciplinary programme in earthquake engineering and engineering seismology which also includes newly emerging fields in seismic risk mitigation and management. The cross-cutting nature of the programme allows students to develop skills which will allow them to communicate across the wide range of fields which comprise the area of seismic risk assessment and mitigation.

The main characteristics of the programme can be summarised as follows:

- All programmes will be 18 months (and thus 90 ECTS credits); students can choose between a Masters in Earthquake Engineering, a Masters in Engineering Seismology or a Masters in Earthquake Engineering and Engineering Seismology.
- Students must obtain 60 ECTS credits from taught modules and 30 ECTS from a Masters Project.
- The curriculum of the course includes engineering seismology, geomechanics, geotechnics and soil dynamics, structural dynamics, seismic design and assessment and seismic risk mitigation.
- All participating institutions will be joint degree-awarding. Students must spend at least one full semester (worth 30 ECTS) in two participating organisations to obtain a joint degree.
- A whole semester will be dedicated to the Masters Project which might be period of research (leading to a traditional Masters dissertation) or a placement in industry (such as a design office, or a risk consultancy).
- Associated professional partners will provide placements for the Masters Project. Some will also provide scholarships to aid the sustainability of the programme and will also offer employment to the MEEES graduates.
- An external advisory board, including associated professional partners as well as key academic and professional figures will monitor the curriculum of the programme, provide guidelines for complementary skills to aid the employability of graduates, and share bestpractice with the consortium.

Website: www.meees.org

#### Partners:

INSTITUTE FOR ADVANCED STUDY PAVIA (IUSS), Italy (Co-ordinating institution) MIDDLE EAST TECHNICAL UNIVERSITY, Turkey UNIVERSITY OF PATRAS, Greece UNIVERSITY OF GRENOBLE 1 - JOSEPH FOURIER, France

#### Contact:

Gian Michele Calvi Rose School, c/o EUCENTRE, Via Ferrata 1 27100 PAVIA - Italy gm.calvi@eucentre.it

#### MEITEI

# M.A. Degree in Economics of International Trade and European Integration

Duration: 1 year

# **Course description:**

This Master's course is an advanced programme in economics jointly taught and organised by a consortium of seven European universities: Universiteit Antwerpen (Belgium) (Co-ordinating institution), Università degli Studi di Bari (Italy), Vrije Universiteit Brussel (Belgium), Universidad de Cantabria (Spain), Université des Sciences et Technologies de Lille (Lille 1) (France), Vysoká škola ekonomická v Praze (Czech Republic) and Staffordshire University (United Kingdom). It is aimed at students interested in working in research/strategy departments of large banks, industrial and commercial organisations, as well as government and international organisations.

The programme is a one-year fulltime taught course with a substantial dissertation component. In the first term, students study in either Staffordshire (United Kingdom) or Lille (France). At the end of the first term, the two sub-groups move from the United Kingdom or France to Antwerp (Belgium). For the third term, the whole group moves to Prague (Czech Republic). The subjects covered by the programme are: Advanced Microeconomics, Advanced Macroeconomics, International Trade: Theory and Policy, Economics of European Integration and Transition, Open Economy Macroeconomics, Econometrics, and an EU policy seminar. In Antwerp and Prague, professors from Brussels, Bari and Cantabria participate in the teaching programme. During the final term, students finalise their dissertation which they may complete in any of the consortium universities.

The main language of the programme is English, however local language courses (French, Dutch and Czech) are offered as optional courses. These courses can contribute to students' overall course credits. The programme leads to the award of a joint Master's degree. This is jointly awarded by the partner universities and signed by the Rector, President or Vice-chancellor of each institution.

The course has a maximum enrolment of 45 students. Applicants should have a Bachelor's degree in economics, applied economic studies or an equivalent, be fluent in English and motivated to study in an international environment. Students are selected by the consortium's Joint Studies Board, based on academic performance.

Website: http://webhost.ua.ac.be/eitei

#### Partners:

University of Antwerp, Belgium (Co-ordinating Institution)
University of Bari, Italy
Free University of Brussels (VUB), Belgium
University of Cantabria, Spain
Lille 1 University of Science and Technology, France
Prague University of Economics, Czech Republic
Staffordshire University, United Kingdom

### Contact:

Wim Meeusen University of Antwerp Department of Economics Prinsstraat 13 2000 Antwerp, BELGIUM wim.meeusen@ua.ac.be

# MEME Erasmus Mundus Master Programme in Evolutionary Biology

**Duration:** 2 years

#### Course description:

The Erasmus Mundus Master Programme in Evolutionary Biology (MEME) is a two-year research oriented master programme for talented and motivated students who are interested in understanding evolution in all its facets. This multidisciplinary programme will address the driving forces of evolution at all levels of organismal organisation (from cells and individuals to populations and ecosystems), and it will allow students to study all kinds of organisms (microorganisms, plants, animals) in a diversity of habitats (marine as well as terrestrial) with a variety of approaches (lab, field, theory). The focus is not only on how evolution shaped life on our planet in the past, but also on how understanding the principles underlying evolution can provide new insights and help to cope with present-day challenges in a variety of fields, including ecology, epidemiology, physiology, immunology, genetics/genomics, bioinformatics, economics and the social sciences.

To realize this ambitious goal, four European universities (University of Groningen, Netherlands; Ludwig Maximilians University of Munich, Germany; Uppsala University, Sweden; University of Montpellier II, France) have joined forces with Harvard University (USA) as an associated partner. MEME offers students the opportunity to compose an individual study programme in evolutionary biology by combining elements from the complementary programmes that are already established at the participating universities. Students spend at least a semester at several partner universities, and they will be awarded double degrees for this. In the first year, the emphasis is on scientific, methodological and academic skills courses (taught in English), while the second year mainly consists of individually supervised research training. After a joint summer school, students start their first semester at either Groningen or Uppsala, then move to Munich or Montpellier for their second semester. Research projects can be conducted at any partner university, including Harvard.

MEME students get a personal mentor, they are offered challenging multidisciplinary courses at the frontline of scientific research, they closely interact with leading researchers and can make use of modern, state-of-the-art techniques and facilities, and they are embedded in a high-quality international network. Accordingly, MEME will provide its students with an optimal preparation for a subsequent PhD study or for other career options in the broad variety of fields where evolutionary thinking is an asset.

Website: http://www.rug.nl/gradschoolscience/education/meme

#### Partners:

UNIVERSITY OF GRONINGEN, Netherlands (Co-ordinating institution) LUDWIG MAXIMILIAN UNIVERSITY OF MUNICH, Germany UNIVERSITY OF MONTPELLIER 2, France UPPSALA UNIVERSITY, Sweden

#### Contact:

Mr. Franz J. WEISSING University of Groningen Nijenborgh 9 9747 AG GRONINGEN - Netherlands f.j.weissing@rug.nl

#### MERIT

# Master of Science in Research on Information and Communication Technologies

Duration: 1 year 10 months

# Course description:

MERIT is a multitrack research-oriented master program based on a flexible curriculum that covers a wide area of knowledge in the field of Information and Communication Technologies. The institutions participating in the consortium, located in Spain, Belgium, Germany, Italy and Sweden belong to the CLUSTER (Consortium Linking Universities of Science and Technology for Education and Research http://www.cluster.org).

The Masters Course covers Information and Communication Technologies in a broad sense, including fundamentals such as electromagnetism, signal processing, and information theory, and applications such as communications, remote sensing and image and voice processing. The language of instruction is English and the program includes local language courses up to 6 ECTS per academic year.

The master is organized in three 15-week semesters in which students take courses followed by a fourth semester devoted to completion of the Master Thesis, which is an original research work in the specialization field selected by the student. During the first three semesters the student registers a total of 90 ECTS in courses. The Master Thesis corresponds to an effort of 30 ECTS, so that at the end of the second year the student completes 120 ECTS. The student mobility is organized on a yearly basis so that the students spent the first academic year in one institution and the second year in a different one. The student registers 60 ECTS in each institution that are fully recognized by its counterpart so that, after successfully completing 120 ECTS, the student is awarded with the degree of the two institutions where he or she has carried out the academic and research activities.

The program is research oriented, and thus concentrates on the development of research skills. Graduates of the Course may want to pursue careers in a research institution by completing a Ph.D. degree, joining industrial R&D departments or perhaps starting a technology spin-off company. Therefore, strong emphasis is placed during the Masters Course on the student's personal work programme, which is focused on developing research skills. Admission is subject to the approval of the MERIT Academic Committee and is restricted to 50 students. All students should have completed a Bachelor's degree in Electrical or Telecommunication Engineering or related field. Admission criteria include the applicant's capacity and motivation, recommendations and language skills. Each admitted student is assigned a specialisation track, a compatible mobility plan and an advisor. The student to professor ratio is less than one.

Website: http://www.meritmaster.org/

#### Partners:

TECHNICAL UNIVERSITY OF CATALONIA, Spain (Co-ordinating institution)
ROYAL INSTITUTE OF TECHNOLOGY, Sweden
TECHNICAL UNIVERSITY OF TURIN, Italy
CATHOLIC UNIVERSITY OF LOUVAIN, Belgium
UNIVERSITY OF KARLSRUHE, Germany

### Contact:

Javier RODRÍGUEZ FONOLLOSA
DEPARTAMENT DE TEORIA DEL SENYAL I COMUNICACIONS
C/Jordi Girona, n°31. UPC Campus Nord
08034 BARCELONA - Spain
director@tsc.upc.edu

#### MESPOM

# Master of Science in Environmental Sciences, Policy and Management

Duration: 1 year 8 months

### **Course description:**

The Masters Course in Environmental Sciences, Policy and Management (MESPOM) prepares students for identifying, developing and implementing integrated solutions to environmental challenges, especially in an international context. In addition to their academic work, students develop research, communication and other professional skills, learn to orient themselves in European and worldwide networks of environmental institutions and professionals, and elaborate relevant career objectives and strategies.

Since 2005, MESPOM has been delivered by a Consortium of four premier European universities: Lund University (LU) (Sweden, Co-ordinating institution), the University of Manchester (UoM) (UK), Central European University (CEU) (Hungary), and the University of the Aegean (UoA) (Greece). From 2010, the MESPOM consortium is joined by two North American centres of excellence: the Middlebury College and its graduate school Monterey Institute for Environmental Studies (MC-MIIS) (USA) and the University of Saskatchewan (UoS, Canada).

The Consortium partners have complementary core competencies (CEU –environmental policy, LU – environmental management, the UoM – environmental sciences, the UoA – local sustainable development and ecosystems management, MC-MIIS – training for international environmental leadership and the UoS – community environmental health) as well an extensive cooperation record in creating a world-class, fully integrated and globally relevant Masters Course which has already enhanced the careers of students from some 60 countries of five continents.

The 2-year (120 ECTS) programme is delivered in English and includes three taught semesters and a fourth research semester. The first two semesters, taught at CEU, focus on understanding of environmental issues, technologies and related economic, policy and other social processes to the ability to analyse environmental human-environment interactions in their specific contexts. The Spring Semester includes the Environmental Careers Workshop and the Ecosystems Management course taught at the University of the Aegean on the island of Lesvos.

During the third semester students choose between specialised tracks in either preventive environmental strategies in organizations (at Lund University) or environmental science (at the University of Manchester). Both tracks emphasize hands-on research and practical experience in research laboratories, private and public sector.

During the fourth term, the students conduct their individual research projects and prepare MSc dissertations in any of the six MESPOM partners. This is typically combined with internships at international organizations, government, industry and NGOs. MESPOM graduates receive a joint MSc degree from the four European partners.

Admission is based on academic excellence, career promise and potential contribution to the atmosphere of multicultural and multidisciplinary learning which is a trademark of MESPOM. MESPOM promotes equal opportunities for all applicants and students.

Website: www.mespom.eu

#### Partners:

LUND UNIVERSITY, Sweden (Co-ordinating institution)
CENTRAL EUROPEAN UNIVERSITY, Hungary
UNIVERSITY OF MANCHESTER, United Kingdom
UNIVERSITY OF THE AEGEAN, Greece
MIDDLEBURY COLLEGE AND THE MONTEREY INSTITUTE OF INTERNATIONAL STUDIES,
United States
UNIVERSITY OF SASKATCHEWAN, Canada

# Contact:

Mr Aleh CHERP
INTERNATIONAL INSTITUTE FOR INDUSTRIAL ENVIRONMENTAL ECONOMICS
Tegnérplatsen 4
22100 LUND - Sweden
coordinator@mespom.eu

#### **MISOCO**

# Joint European Master in International Migration and Social Cohesion

Duration: 1 year 8 months

# **Course / Programme description:**

The general aim of the Master programme in International Migration and Social Cohesion is to educate students and create dialogue among students, professionals and policy makers who will understand advanced theories, techniques, and methodologies in the field of Migration Studies, and who will be able to translate perceived societal problems into relevant social scientific research questions and to contribute to the solution of such problems by combining insights from fundamental social theory joined with substantive theories. More specifically, the programme seeks to explore the critical elements of international migration and the incorporation of immigrants in the society of destination.

This Master is unique to Europe and unique in the countries and the institutions (both EU and thirdcountry) which participate in the Consortium, a unique opportunity to bring together those who have an interest in creating a shared outlook for Europe in terms of migration studies. All the partner universities not only teach but actively research various migration-related issues, thus being able to offer students state-of-the art knowledge in respective specialization areas. This Master mobilizes key experts from the International Migration, Integration and Social Cohesion Network of Excellence (IMISCOE, http://www.imiscoe.org/), which is a multi-disciplinary research programme comprised of more than 500 researchers from 23 established EU research institutes. Besides, six of the Consotium universities are members of HumanitarianNet (http://www.humanitariannet.deusto.es/), which has a special Thematic Subgroup on Migrations; and five of these universities are currently developing a Joint Doctorate in Migration, Diversity and Identities (EDMIDI).

MISOCO is a two-year course, where in Year 1 all the students study together, first – at the University of Amsterdam (1st semester) and then at the University of Deusto (2nd semester). In Year 2 students choose – out of the other universities of the Consortium – a Specializing Institution, where they spend 3rd semester deepening their knowledge and expertise of a particular area and 4th semester working on their dissertation. The language of instruction is English. Upon successfully completing the course students receive a Joint /Double Degree issued by those Universities of the Consortium where the candidate has carried out his/her studies and automatically recognized by all universities in the Consortium.

Website: http://www.MISOCO.lu.lv

# Partners:

UNIVERSITY OF LATVIA, Latvia (Co-ordinating institution) YORK UNIVERSITY, Canada ANTONIO RUIZ DE MONTOYA UNIVERSITY. Peru MOLDOVA STATE UNIVERSITY, Moldova UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN, Ireland UNIVERSITY OF OSNABRÜCK, Germany UNIVERSITY OF DEUSTO, Spain UNIVERSITY OF POITIERS, France UNIVERSITY OF AMSTERDAM, Netherlands

### Contact:

Baiba Bela-Krumina **FACULTY OF SOCIAL SCIENCES** Lomonosova 1a 1019 RIGA - Latvia baiba.bela-krumina@lu.lv

# MONABIPHOT Molecular nano- and bio-photonics for telecommunications and biotechnologies

Duration: 2 years

# Course description

This Master's Course offers an original qualification in the highly innovative domain of molecular photonics for telecommunications and biology. Interdisciplinary skills will be acquired at the level needed to master emerging technologies and develop original concepts and breakthroughs in this domain. The Master's consortium involves the Ecole Normale Superieure of Cachan (ENS) (France), Complutense University, Madrid (Spain), University of Wroclaw (Poland), and Wroclaw University of Technology (WUT) (Poland).

The Course begins with a common introductory training at ENS in France which includes fundamental topics in Mathematics, Physics, Chemistry and Biology and language modules. Mandatory courses are devoted to Nanophotonics, Light-Matter Interactions and Molecular Interactions. Some optional courses may also be taken during this term. The second semester is spent either at Complutense (organic chemistry and sensors), or at the University of Wroclaw (biochemistry and modelling). At the end of the first year, a summer school is organised which focuses on a research topic relevant to the Master's Programme. The third semester is spent either in France (focusing on materials and photonic devices for optical signal processing or biological applications), or at WUT in Poland (optoelectronics and photonics for life sciences). The last semester is fully devoted to a research project in an academic or industry laboratory. The programme accepts 40 students and has a professor/student ratio of about 3 professors for 2 students. Lectures are in English and Spanish.

Students graduated for MONABIPHOT have found very easily grants for PhD or jobs in companies. Each institution awards its own Master's degree, resulting in a double or multiple degree. Applicants with three years of prior higher education are eligible to apply. The selection committee will take into account the quality of the higher education institutions where students have previously studied, their academic results, their motivation, recommendation letters, any awards and grants for excellence, and language skills.

Website: http://www.ens-cachan.fr/monabiphot/

# Partners:

Ecole Normale Superieure of Cachan, France (Co-ordinating Institution) Complutense University of Madrid, Spain Wroclaw University of Technology, Poland University of Wroclaw, Poland

#### Contact:

Isabelle Ledoux-Rak Institut d'Alembert 61, avenue du Président Wilson 94235 Cachan, France

# MScEF Master of Science in European Forestry

**Duration:** 2 years

### Course description:

Master of Science in European Forestry is a two-year programme that provides academic education in forest science. The course offers a new approach to the markets in forestry and nature management and it connects the increasing number of forest-related issues with European dimension at international as well as national levels. The objectives of the MSc EF programme are to educate professionals who have a thorough understanding in sustainable forestry and in European business culture. The curriculum is specifically designed to take into consideration the needs of potential employers and our graduates are highly appreciated by national and international forest management agencies, governmental bodies, NGOs, research institutions and timber, paper and pulp enterprises.

In this course, seven European forestry universities collaborate intensively to offer joint study modules in addition to their existing curricula. The MSc EF consortium consists of the following universities: Joensuu (coordinator Finland), AgroParisTech (France), SLU (Sweden), Freiburg (Germany), Lleida (Spain), BOKU (Austria) and Wageningen (the Netherlands).

FIRST STUDY YEAR:

Module 1 – Trends in European Forestry

Module 2 – Sustainable Forest Management in Europe

Module 3 – Elective courses

Module 4 – Applied Period in Forest Institutions

Module 5 – European Forestry Field Course

Module 6 - Multifunctional Forestry in Mountain Regions

SECOND STUDY YEAR:

Module 7 – Advanced courses

Module 8 - Master's thesis

Modules 1, 2, 5 and 6 are fully a joint effort of the consortium and they provide the students with solid understanding of European forestry practices. The students study as one group and get to visit all the consortium universities. Modules 3, 4, 7 and 8 are organised in different consortium universities and they allow students to further improve their competences in their areas of interest related to culturally, ecologically, economically and socially sustainable forestry. For Modules 4, 7 and 8, students are distributed among the consortium universities according to students' specialisation.

The official language of the course is English with ample opportunities to learn local languages. Upon graduation, each student shall receive a double-degree i.e. two national Master's degree certificates with a Diploma Supplement. One of the degrees is always issued by the University of Joensuu and the other one is issued by the university where the student has completed the Module 7 studies. The programme is open to highly-motivated students who have completed a BSc in forestry or related fields. A variety of scholarships are available for potential students.

Website: www.europeanforestry.net

#### Partners:

UNIVERSITY OF JOENSUU, Finland (Co-ordinating institution)

PARIS INSTITUTE OF TECHNOLOGY FOR LIFE, FOOD AND ENVIRONMENTAL SCIENCES, IN ITS ENGREF COMPONENT, France

UNIVERSITY OF NATURAL RESOURCES AND APPLIED LIFE SCIENCES, VIENNA, Austria

UNIVERSITY OF FREIBURG, Germany

SWEDISH UNIVERSITY OF AGRICULTURAL SCIENCES, Sweden

WAGENINGEN AGRICULTURAL UNIVERSITY, Netherlands

UNIVERSITY OF LLEIDA, Spain

#### Contact:

Timo Tokola University of Joensuu Yliopistokatu 2 80100 JOENSUU - Finland timo.tokola@joensuu.fi

# MSCM Master of Science in Computational Mechanics

**Duration:** 2 years

#### Course description:

This full-time programme is offered by: Universitat Politècnica de Catalunya (Barcelona, Spain), Swansea University (United Kingdom), École Centrale de Nantes (Nantes, France) and Universität Stuttgart (Stuttgart, Germany). These institutions have a longstanding tradition in Computational Mechanics.

# Objectives:

The Master is designed for students who wish to develop their knowledge and competency in the field of computational mechanics with applications in solids, fluids and interdisciplinary fields. The goal is to provide the students with the skills for the modelling, formulation, analysis and implementation of simulation tools for advanced engineering problems, as well as skills for understanding these approaches in the broader context of engineering science. Students may take the Master as a professional terminal degree, or in preparation for a Ph.D. degree.

Duration and mobility:

The Master's programme consists of 120ECTS (two academic years). Students attend two institutions: the first institution (either Barcelona or Swansea) is responsible for teaching 35ECTS and the second institution, different from the first one (Stuttgart, Nantes, Barcelona or Swansea), the remaining 85ECTS. It is organized in four terms.

#### Summary of study programme:

The first term is aimed at providing a solid background on mechanics and numerical methods. It consists of a set of core modules completed by elective modules. These core modules are taught jointly at Barcelona and Swansea (same syllabus and exams). The second term consists of a minor aimed at providing a more in-depth knowledge in a selected area. The third and fourth terms include Practical Training in industry or an applied research centre and a Master's Thesis.

#### Complementary information:

Students are distributed evenly between partners, the entire Master Programme is taught in English. See all details as well as admission requirements and degrees awarded at the master's website.

Website: www.cimne.com/cm-master/

#### Partners:

Technical University of Catalonia, Spain (Co-ordinating institution)
University of Stuttgart, Germany
Ecole Centrale de Nantes, France
Swansea University, United Kingdom

#### Contact:

Pedro Diez UNIVERSITAT POLITECNICA DE CATALUNYA DEPARTAMENT DE MATEMATICA APLICADA III Jordi Girona, 31 - Edifici C2 08034 BARCELONA - SPAIN pedro.diez@upc.es

# MSGT Master of Science in Geospatial Technologies

Duration: 1 year 6 months

# Course description:

The International Masters Program (Master of Science, M.Sc.) in Geospatial Technologies is a cooperation between:

- University of Münster (WWU), Institute for Geoinformatics (ifgi),
- Universitat Jaume I (UJI), Castellón, Spain, and,
- Universidade Nova de Lisboa (UNL), Instituto Superior de Estatística e Gestão de Informação (ISEGI), Lisboa, Portugal.

The English three-semester Masters program enrols up to 32 students per year, started in the fall/winter semester of the academic year 2007/08.

- The first semester offers different learning paths, addressing the previous know-how and requirements of the students. The courses at UJI focus on the provision of know-how in informatics, new media, and GI basics. UNL provides modules in mathematics, data modelling, and GI basics.
- The second semester at the WWU provides basic and advanced courses in GIScience. In addition, courses in additional key competencies (project management, research methods) are provided. Optional for selected courses is the alternative attendance of a summer school.
- The Master thesis in the third semester is closely linked to ongoing research projects of one of the partners.

Based on the successful Master examination, the three universities will award the joint degree "Master of Science" (M.Sc.) with the adjunct "in Geospatial Technologies".

The Masters program targets qualification in many application areas of Geographic Information (GI), e.g., environmental planning, regional planning, logistics/traffic, marketing, energy provision, etc.. GI is a rapidly growing market offering excellent career chances, but it lacks qualified GI personnel. The Masters Program therefore targets life-long learning for graduates and professionals in the fields of geography, surveying, planning, local administration, etc., who are willing to acquire additional GI skills for applying them in their respective GI application area.

Website: http://geotech.uni-muenster.de

### Partners:

University of Munster; Germany (Co-ordinating institution) Jaume University, Spain New University of Lisbon, Portugal

#### Contact:

Christoph Brox IFGI - Institute for Geoinformatics Weseler Strasse 253 48151 Münster, GERMANY broxc@uni-muenster.de

# MSPME Masters in Strategic Project Management

**Duration:** 1 year 4 months

#### Course description:

This Master's Course offers a balanced programme of professional training informed by the most recent research in the field of strategic project management. Over a 16-month full-time study period, students develop a systematic understanding of strategic project management and acquire a critical awareness of the contemporary, pervasive issues concerning this subject, both in the academic field and in professional practice.

The universities involved in the consortium are Heriot-Watt University (United Kingdom), Politecnico di Milano (Italy), and Umeå University (Sweden). Students of the Course will learn to understand and evaluate a comprehensive range of research techniques used in strategic project management. With these tools, they will be able to critically evaluate the development and use of strategic project management in business and management. Students will also carry out original research on this topic by completing a Master's Thesis.

The course is developed around three interconnected themes: strategy, control and integration, which reflect the core strengths of each participating University. During the first study period, Heriot-Watt University (School of Management and Languages) provides a high-level background in project planning, strategy formulation, and implementation in organisations. In the second study period, Politecnico di Milano(MIP Business School) focuses on the function, purpose, creation and management of appropriate control mechanisms in strategic projects. During the third study period, at Umeå University (Umeå School of Business), students enhance their learning with an integrated and research-based approach to strategic thinking and project management, completing two integrated modules and a Master's thesis.

Courses will be taught in English. Students also have access to a 12 week English language training (at Heriot-Watt University); 2 month Italian language course (at Politecnico di Milano); and an introductory Swedish course (at Umeå University). The class size is around 30-35 students, with a professor/student ratio of between one professor to five students and one professor to eight students. The degree offered is a multiple degree, awarded by the universities at which the student studies. The transferable skills acquired will enhance students' employability, particularly in middle-to-senior strategic and business-related positions in a wide range of public and private organisations. Students will also be prepared for future academic research and lifelong learning, in addition to the impact the degree will have on their personal development.

Selection is competitive and emphasises academic performance and credentials. The minimum admission criteria are a high-quality Bachelor degree (or an equivalent academic degree), excellent English language ability, and relevant professional experience. Candidates' first degrees should be in a relevant discipline, or in a semi-cognate discipline (for example in business and management, or science and engineering).

Website: http://www.mspme.org/

#### Partners:

Heriot-Watt University, United Kingdom (Co-ordinating Institution) Politecnico di Milano, Italy Umeå University, Sweden

#### Contact:

Amos P Haniff Heriot-Watt University Edinburgh EH14 4AS, UNITED KINGDOM A.Haniff@hw.ac.uk

# MUNDUS MAPP Erasmus Mundus Masters in Public Policy

**Duration:** Up to 2 years (depending on internship)

# Course description:

MUNDUS MAPP embeds the scholarly field of transnational public policy into a European context. The degree of political integration makes the EU a unique laboratory for studying public policy beyond the nation-state. Policy-making in the European space also involves the interaction of diverse cultural, political and bureaucratic structures. MUNDUS MAPP provides students access to this European model of transnational governance. These processes involve tremendous challenges to policy-makers but also create an enormous potential for policy learning and transfer. MUNDUS MAPP provides a systematic understanding of how political institutions, processes and public policies operate and interact from the global political economy through to national and local levels with a direct focus on European engagements at these levels of governance.

Four universities from Britain, Hungary, the Netherlands and Spain deliver this programme. MUNDUS MAPP offers:

- 1. A foundation year in policy studies and research methods at either the University of York OR the Institute of Social Studies in the Hague, finishing with a thesis;
- 2. An annual summer school, taught by consortium faculty and Erasmus Mundus visiting scholars;
- 3. A second specialised year in the transnational and international dimensions of policy at either the Central European University, Budapest OR at the Barcelona Institute of International Studies, finishing with an applied research or policy paper.
- 4. An internship at a relevant policy institution where students will have the chance to gain practical experience in policy analysis.

Strong conceptual foundations combined with practice and policy-oriented learning provides MUNDUS MAPP graduates with skills and subject-specific knowledge for embarking on or furthering professional careers as policy-makers or policy-analysts in politics, the civil service, international organisation or in the corporate and non-governmental sectors. Graduates will have in-depth knowledge of European policy making milieus, and solid institutional and personal networks that will take them forward to leadership roles within Europe and the world.

MUNDUS MAPP collaborates with the Framework 6 GARNET Research Network of Excellence: 'Global Governance, Regionalisation and Regulation'.

Website: http://www.mundusmapp.org/

### Partners:

Central European University, Hungary (Co-ordinating institution) Barcelona Institute of International Studies, Spain Institute of Social Studies, Netherlands University of York, United Kingdom

#### Contact:

Dr Agnes Batory KOZEP-EUROPAI EGYETEM Department of Public Policy Nador u.9. 1051 Budapest, HUNGARY mundusmapp@ceu.hu

#### **MUNDUS URBANO**

# Interdisciplinary Erasmus Mundus Master Course in 'International Cooperation and Urban Development'

**Duration:** 2 years

#### Course description:

MUNDUS URBANO - the Interdisciplinary ERASMUS MUNDUS Master's Course 'International Cooperation and Urban Development' addresses the rapid urbanization process now typical in many regions of the world. It discusses strategies to prevent or alleviate the problems invariably associated with this process since conventional wisdom of town planning has proven of little use to deal with this situation: the highly complex phenomenon calls for innovative and complex responses that incorporate physical, managerial, economic and social elements simultaneously. Adequate professional methodologies develop in the field and cannot be copied from the text books.

Therefore this Master's course will provide up-to date knowledge about current theories and practices of urban development planning especially in countries of the South and in the East. As a large proportion of investments in this field involve foreign aid and finance, a second focus is placed on international cooperation practice where we obeserve an unsatisfied need for well prepared experts. The 2-year course is innovative in its transdisciplinary set-up, arranging knowledge around an emerging global phenomenon rather than starting from the conventional academic faculty framework. Tuition is shared between four prestigious universities in Germany, Italy, Spain and France. All lecturers are internationally distinguished scholars and practitioners in the topic of their respective training module, which guarantees an academic quality level that could not be attained by a course relying on one university's home faculty alone. The multi-national composition of both students and academic staff fosters the building of world-wide professional networks for course participants - an indispensable asset in this particular professional setting.

The first year of the Master's course consists of a series of short and intensive workshops each of them dedicated to a key issue in in urban development in the context of proceeding globalization. It is taught at Darmstadt University (Germany) and is geared towards the capability to conceive, oversee and evaluate comprehensive urban projects in the framework of sustainable development.

The second study year provides scope for further specializations in a field of knowledge other than the student's first university degree. The resulting double qualification allows a graduate from this course to subsequently fill a professional niche unattended in the conventional university system. Specialization options - always linked to international cooperation as a common denominator - are:

- (A) Urban development economics (in Rome)
- (B) Sustainable ousing and architecture approaches responing to emergency situations (in Barcelona)
- (C) Urban management and social programs (in Grenoble)

Tuition is in English (and partly in French in the case of Grenoble) and applicants must have a first university degree plaus a minimum of one year works experience in a pressional context related to the course contents. Graduates will be awarded a double degree (MSc.) and be eligible for a subsequent PhD study in the EU

Website: www.mundus-urbano.eu

#### Partners:

Technical University Darmstadt, Germany (Co-ordinating institution) International University of Catalonia, Spain University Pierre Mendez France, France University of Rome Tor Vergata, Italy

#### Contact:

Prof. Dr. Kosta Mathéy Technical University Darmstadt El-Lissitzky Str.1 64287 Darmstadt, GERMANY

# MUNDUSFOR Formation de professionnels de la formation

**Duration:** 2 years

# Course description:

Mundusfor will provide the tools and competencies necessary for the education of professionals involved with teaching in educational institutions, in enterprises, and in community development agencies and associations.

The master degree intends to provide the acquisition of several competencies that will enable the student to: reflect over education and its diverse dimensions in Europe and in the world; have an attitude toward research aimed at the improvement of professional practice; manage and lead educational services and programmes; design, implement and evaluate intervention strategies in the education of professional educators; be a proficient mentor in consultancy in different areas of education of professionals.

The master degree programme is organised in 2 years (120 ECTS): 1st semester; modules common to the 5 universities about the following themes: A. The context of education and professions. B. Evaluation for improvements in education. C. Management of education. D. Guidance and counselling. E. Innovation. F. Thesis: Research on professional practice. 2nd and 3rd semesters, Specialisations A/F: Akershus: Teacher education for technical and vocational education and training; Granada: Education for teachers in higher education; Tarragona: Education and management of human resources; Reims: Education of teachers, of trainers in enterprises and of consultants; Porto: Local development and education of adults. All the universities: G. Seminar for academic and social integration of students and academic staff. 4th semester, Practice and Research: H. Training programme in institutions, service organisations and enterprises; I. Development and implementation of the research project about professional practice.

Two languages are required: one from the university where the student starts the programme and the other from where the specialization is carried out: Akershus - English; Granada and Tarragona - Spanish; Porto – Portuguese; Reims – French.

Website: http://www.ugr.es/~mundusfor/

#### Partners:

University of Granada, Spain (Co-ordinating institution) Rovira I Virgili University (Spain) University of Rheims Champagne-Ardenne, France Akershus University College, Norway University of Porto, Portugal

#### Contact:

Manuel Fernandez Cruz UNIVERSIDAD DE GRANADA DEPARTAMENTO DE DIDÁCTICA Y ORGANIZACIÓN ESCOLAR Campus de Cartuja s/n 18071 Granada, SPAIN mfernand@ugr.es

# NOHA Mundus Joint Master's Degree Program in International Humanitarian Action

Duration: 1 year 4 months

### **Course description:**

The NOHA Mundus Joint Master's Degree Programme in International Humanitarian Action is an inter-university, multidisciplinary postgraduate programme that provides high quality academic education and professional competencies for personnel working or intending to work in the area of humanitarian action. It is delivered by seven NOHA Network members (Université Catholique de Louvain, Belgium; Université Paul Cézanne Aix-Marseille III, France; Ruhr-Universität Bochum, Germany; University College Dublin, Ireland; Universidad de Deusto, Spain; University of Uppsala, Sweden; and University of Groningen, the Netherlands) in association with seven third country partner universities (Monash University, Australia; Universidad Javeriana, Colombia; Bangalore University, India; Universitas Gadjah Mada, Indonesia; Saint-Joseph University, Lebanon; University of Western Cape, South Africa; Columbia University, New York, United States) in collaboration with the European Union, non-governmental and inter-governmental organizations, and other humanitarian stakeholders.

The Programme is sixteen months in duration comprising three semesters that extend from early September through to December of the following year (90 ECTS). The programme has four main components, namely:

- Intensive Programme (5 ECTS): located at the NOHA Coordinating University and takes place during the first two weeks of September;
- Core Course (25 ECTS): delivered at the NOHA Home Universities and extends from mid-September to the end of January;
- Orientation Period (30 ECTS): delivered at the NOHA Host universities from the beginning of February to the middle of June;
- Research and Internship (30 ECTS) at the Home University or at a NOHA third country University and/ or in collaboration with a Humanitarian Organisation/ Agency linked to the Network. It extends from July to December.

The programme is modularised to enhance flexibility and comparability. The programme is assessed on the basis of jointly agreed learning outcomes built around the profile (knowledge and skills) required of humanitarian professionals. These knowledge and skills are expressed as competencies e.g. problem solving capacities to work effectively in the field. After successfully completing all programme components, students will be awarded a Joint Diploma in International Humanitarian Action from the home and host universities. The Diploma Supplement is given to all students and a Joint Diploma Supplement will be issued when in keeping with national regulations. Languages of instruction are: English, French and Spanish. All candidates are chosen on the basis of common selection criteria, which include; the quality of their education, professional background, experience in and concern for humanitarian issues, multicultural sensitivities, and linguistic abilities.

Website: http://www.nohanet.org/

#### Partners:

UNIVERSITY OF DEUSTO, Spain (Co-ordinating institution)
MONASH ASIA INSTITUTE, Australia
PONTIFICAL UNIVERSITY JAVERIANA, Colombia
BANGALORE UNIVERSITY, India
UNIVERSITAS GADJAH MADA, Indonesia
SAINT JOSEPH UNIVERSITY, Lebanon
UNIVERSITY OF THE WESTERN CAPE, South Africa
RUB UNIVERSITY OF BOCHUM, Germany
CATHOLIC UNIVERSITY OF LOUVAIN, Belgium
UNIVERSITY PAUL CEZANNE AIX-MARSEILLE 3, France
UNIVERSITY OF GRONINGEN, Netherlands
UPPSALA UNIVERSITY, Sweden
UNIVERSITY COLLEGE DUBLIN NATIONAL UNIVERSITY OF IRELAND, Ireland
COLUMBIA UNIVERSITY, United States

# Contact:

Cristina Churruca Muguruza
PEDRO ARRUPE INSTITUTE OF HUMAN RIGHTS
Av. de las Universidades 24
48007 BILBAO - Spain
cchurruc@relint.deusto.es

# NORDSECMOB Masters programme in Security and Mobile Computing

Duration: 2 years

### **Course description:**

This joint Master's programme combines a diversity of expertise at five European universities, enabling students to acquire a deep knowledge of the practice and theory of computer science, data security, and mobile computing. Students will develop the research skills to further their studies at the PhD-level and gain international research experience in a high-quality R&D environment with access to major international networks.

The five universities offering this programme are Helsinki University of Technology (Finland), Technical University of Denmark (Denmark), The Royal Institute of Technology, Stockholm (Sweden), the Norwegian University of Science and Technology (Norway), and the University of Tartu (Estonia).

With regards to mobility, a joint curriculum is defined involving two of the universities, a 'home' university and a 'host' university. The programme includes three semesters of courses followed by a fourth research semester (Masters thesis) under supervision and evaluation by both the home and host university. The student takes courses focusing on advanced topics in a selected area of specialization. These include Technical Information Security and Network services, Communications Systems Design, Security in Telematics, Software security, and Mathematical foundations of cryptography.

The first autumn term is spent at one of the three home universities in Finland, Sweden or Norway. Students specialising in "Software Security" move from the home university to Denmark for the first spring semester and stay there for their second year. Students with other specialization tracks move after their first year studies to other host universities in Finland, Norway, Sweden or Estonia for the second autumn semester.

The language of instruction is English. Intended for a small number of top-level students, the programme will accept about 45-60 students with a staff/student ratio of around five professors to four students. Upon completion, the students will receive a degree from each of the universities in which they spent a part of their study (a double degree issued by home and host university).

Admission criteria are a high quality Bachelor's degree in Computer Science of information technology or equivalent studies. Good knowledge of English is also required and must be proven with the appropriate test results.

Website: http://nordsecmob.tkk.fi/

### Partners:

Helsinki University of Technology, Finland (Co-ordinating Institution) Royal Institute of Technology in Stockholm, Sweden Norwegian University of Science and Technology, Norway Technical University of Denmark, Denmark University of Tartu, Estonia

#### Contact:

Eija Kujanpää Planning officer - International Affairs Department of Computer Science and Engineering Konemiehentie 2 Espoo, P.O. 5400 02015 TKK, FINLAND eija.kujanpaa@tkk.fi

# OPSCITECH Optics in Science and Technology

**Duration: 2 years** 

# **Course description:**

Optics is crucial to science and industry. Optics plays a major part in the biosciences, medical technology, quantum physics, telecommunications, optical systems, mechatronics and image analysis. This Master's programme offers comprehensive coverage of the field of optics, from upstream scientific aspects to engineering and applications in major economic sectors.

Students in the two-year programme study at two institutions in different countries for one year. The objective is to train highly-skilled and qualified graduates for technical or scientific positions in industries specializing in optics or using optics. A logical extension of this coursework could be to pursue a PhD at the cutting edge of new technologies. The main language of instruction is English, and examinations may be taken in English at all the sites. Additionally, local language courses are available at all the institutions. It is expected that approximately twenty European students and twenty students from the rest of the world will be admitted each year.

The course is made up of study-tracks jointly designed by the partner institutions of Institut d'Optique *Graduate School* and Université Paris-Sud II (France), Friedrich-Schiller-Universität Jena (Germany), Technische Universiteit Delft (Netherlands) Politechnika Warszawska (Poland) and Imperial College London (United Kingdom) Core courses in fundamentals of optical sciences are provided on all sites as well as laboratory work and development of transferable skills. Advanced courses vary depending on the specific areas of excellence of each institution. Project and Master's thesis work are carried out in leading academic or industrial research environments.

At the end of each academic year all students attend a one-week summer workshop at a different location. The activities include seminars and tutorials given by visiting scholars, academic staff and professionals from the optics and related industries. Master's thesis dissertations are presented by the graduating students and opportunities at partner institutions are presented. Each successful graduate is awarded the Master's degrees of the two institutions where he or she has studied.

Applicants should possess a good Bachelor of Science or Bachelor of Engineering degree that includes significant exposure to physics and introductory exposure to optics. Other selection criteria include past awards, external academic references, details of earlier projects and proof of English proficiency.

Website: www.master-optics.eu

#### Partners:

Institute of Optics Graduate School, France (Co-ordinating institution) Friedrich-Schiller-University of Jena, Germany University of Paris II, France Delft University of Technology, Netherlands Warsaw University of Technology, Poland Imperial College London, United Kingdom

#### Contact:

Alan Swan
Institut d'Optique *Graduate School*Campus Polytechnique
RD 128
91127 PALAISEAU Cedex - France
alan.swan@institutoptique.fr

# PHOENIX EM Dynamics of Health and Welfare

**Duration:** 2 years

# Course description

The objective of this Master's Course is to provide knowledge and expertise for the management of health and welfare in Europe and elsewhere. The key to such management lies in understanding the multiple links binding health and welfare, and the critical analysis of such links. The programme is coordinated by the School of Higher Studies in Social Sciences, Paris (France), in collaboration with the University of Evora (Portugal), the Linkoping University (Sweden), and the Autonomous University of Barcelona (Spain). Teachers at the London School of Hygiene and Tropical Medicine (United Kingdom), the Charles University in Prague (Czech Republic), the Pecs University (Hungary), and the Warsaw University (Poland) are also associated with the programme. These institutions provide a multidisciplinary approach to the subject, drawing on perspectives from political science, public health, history, sociology, anthropology, philosophy, demography, epidemiology, and economics.

The Master's programme lasts two years, including a two-week intensive course and one full semester of mobility in one of the universities other than the main university selected by the student. The Course offers a unique academic experience with inter-university mobility, lectures, seminars, working groups and tutorials. Instruction is provided by internationally-recognised scholars with high-quality publication records.

The languages of teaching will be French and English (in Paris and Linkoping), and Spanish in Barcelona. In Evora, instruction is in English and Portuguese, but Spanish will be accepted for examination. Students' Master's theses can be written in English, French, Spanish or Portuguese (with a twenty-page summary in English or in French for the two latter choices). Classes in the local language will be organised to assist the integration of students. The students will be tutored personally and welcomed by the international office. Particular assistance will be given concerning housing and integration into daily life, including special attention for married students, families, and disabled students.

In addition to the award of a double masters' degree from the insitutions where the students study, students will be given a diploma supplement, indicating the title of each module, the marks obtained and their final ranking. The selection of students will be based on their academic backgrounds, with preference being given to those with double Bachelor's degrees. The student's overall excellence (marks and ranking), the quality and originality of the student's research objectives, and the scientific merit of their project will be considered. Fluent English is required as well as competency in another language (French, Spanish or Portuguese).

Website: http://mundus-healthwelfare.ehess.fr/

### Partners:

School of Higher Studies in Social Sciences, France (Co-ordinating Institution) Linkoping University, Sweden University of Evora, Portugal Autonomous University of Barcelona, Spain

#### Contact:

Patrice Bourdelais Ecole des Hautes Etudes en Sciences Sociales 54, boulevard Raspail 75006 Paris, France bourdela@ehess.fr

# QEM Models and Methods of Quantitative Economics

**Duration:** 2 years

# **Course description**

The Autonomous University of Barcelona (Spain), Bielefeld University (Germany), the University of Paris 1 Pantheon-Sorbonne (France) and Ca' Foscari University of Venice (Italy) offer this two-year Master's programme in Quantitative Economics. The objective of the Course is to educate students in the methodologies of advanced economics, as well as to refine their research competencies and enhance their ability to apply quantitative economics in practice.

The programme offers four areas of specialisation: Macroeconomic Models; Microeconomics (Theory and Applications); Finance, and Mathematical Economics and Econometrics. These are emergent, rapidly evolving areas that require the specialised knowledge provided by this programme.

A first year of foundation courses is offered in parallel at all consortium universities where all students will spend a semester. Afterwards, a joint curriculum is defined for each area of specialisation, involving two of the consortium universities. The student will study in both universities, according to their specialization. In addition, Students will also prepare a Masters dissertation on a research topic under the joint supervision of the two universities specializing in that topic. Courses are taught in English. Students will also undertake courses on the culture and languages of the European countries they visit.

The Master's programme is intended for top-level international students. About 40 students are selected each year. Upon successful completion of the programme, students will be awarded a double degree from the universities at which they studied.

Admission is based on academic excellence. Applicants should have a Bachelor's degree or equivalent, strong interest and/or previous studies in Economics, undergraduate training in mathematics (or related backgrounds such as engineering), and a fluent knowledge of spoken and written English.

Website: http://erasmus-mundus.univ-paris1.fr/

#### Partners:

University of Paris 1 Pantheon-Sorbonne, France (Co-ordinating Institution) Autonomous University of Barcelona, Spain University of Bielefeld, Germany Ca' Foscari University of Venice, Italy

# Contact:

Bernard Cornet Université Paris 1 Panthéon-Sorbonne 106, boulevard de l'Hôpital 75647 Paris Cedex 13, France Bernard.Cornet@univ-paris1.fr

#### SAMHC

# Advanced Masters in Structural Analysis of Monuments and Historical Constructions

Duration: 1 year

# Course description:

The master's course is to give students of civil engineering and related fields the opportunity to extend interdisciplinary training in the field of Structural Analysis of Monuments and Historical Constructions. The main focus of this training is the application of scientific principles in analysis, innovation and the practice of conservation of monuments and historical constructions worldwide. The Master combines the diversity of expertise at leading European universities in a research oriented environment, with close cooperation with the industry.

The relationship of the institutions and academics with ICOMOS, with consultancy in major monuments worldwide, with the International Journal of Architectural Heritage and the leading international series of conferences ascertains the possibility of benefiting from the contact and collaboration of world experts and top international expertise.

The Master Course has a duration of 12 months, using English as language of instruction, in two different European locations. The number of lecturers is selected each year from a large pool of 30 international experts due to the adopted modular ratio. The admission requirements for students wishing to enrol in the Master Course are a good quality degree in Civil Engineering or equivalent qualifications.

The study programme is composed of six regular courses, one project-based course and one dissertation. The regular courses are arranged as a mix of theory and application, in a context of a project-led education. The truly project-based course includes a mini group project to solve an engineering problem, with site visits and seminars. The general description of the regular courses is: History of Construction and of Conservation; Structural Analysis Techniques; Seismic Behaviour and Structural Dynamics; Inspection and diagnosis; Repairing and Strengthening Techniques; Restoration and Conservation of Materials.

Website: www.msc-sahc.org

### Partners:

University of Minho, Portugal (Co-ordinating institution) Czech Technical University in Prague, Czech Republic Technical University of Catalonia, Spain University of Padua, Italy

# Contact:

Paulo Lourenço
Universidade do Minho
Civil Engineering Department
Azurem
PT-4800-058 Guimaraes – PORTUGAL
pbl@civil.uminho.pt

# SEFOTECH.NUT European MSc in Food Science, Technology and Nutrition

Duration: 1 year 9 months

### Course description:

The aim of the European MSc course (SEFOTECH.NUT) is to foster and develop knowledge and awareness of scientific trends and health issues in food science, technology and nutrition in a global context.

The course will provide students with a comprehensive knowledge and understanding of global food issues, international trends and food problems, given the globalization of food industry along with highlighting ongoing problems and concerns with regard to food safety, nutrition and environmental issues. In addition, the course will enhance the professional competencies of the students taking cognisance of management and ethics. These skills will enable young professionals to meet current demands for highly-skilled staff in food science, technology and nutrition.

The course is jointly offered by the Catholic University College, Ghent (Belgium), the Dublin Institute of Technology (Ireland), the University of Applied Science of Anhalt in Köthen (Germany) and the Portuguese Catholic University, Porto (Portugal). Associate partners include: TUFTS University – USA, Northwest A&F University – China, National Institute of Public Health of Mexico, Michurinsk State Agrarian University – Russia, National Dairy Research Institute of Karnal – India.

SEFOTECH.NUT is a modular, international four-semester Masters course involving ten course modules, a professional competences module of one semester and a thesis semester. The course is fully integrated through six compulsory modules being offered at two partner institutions and eight optional modules being offered between all four partner institutions. The optional modules allow students to deepen their knowledge in particular food products, food groups, production sectors and in nutrition.

The professional competence module enables to establish partnership and strong links with socio-economic sectors by providing extended theoretical and practical training in a specialized field.

The studies can be taken in a minimum of two partner institutions.

The award of a joint European M.Sc. degree will be based on successful completion of ten modules (60 ECTS), the professional competence module (30 ECTS) and thesis (30 ECTS). The SEFOTECH.NUT course is taught in English.

The minimum entry requirements are an academic B.Sc. degree, or equivalent study, with excellent grades in relevant subjects such as Chemistry, Biological Sciences, Food Science and Technology, Nutrition or Engineering or cognate subject area.

Website: http://www.sefotechnut.org

#### Partners:

CATHOLIC UNIVERSITY OF APPLIED SCIENCE SINT-LIEVEN, Belgium (Co-ordinating institution) DUBLIN INSTITUTE OF TECHNOLOGY, Ireland CATHOLIC PORTUGUESE UNIVERSITY, Portugal UNIVERSITY OF APPLIED SCIENCE ANHALT, Germany

### Contact:

Chris Van Keer Gebr. Desmetstraat 1 9000 GENT - Belgium Chris.vankeer@kahosl.be

# SELECT Environomical Pathways for Sustainable Energy Systems

**Duration:** 2 years

#### Course description:

Sustainable energy services is one of the key issues for humanity, considering the complete environmental footprint for the services delivered. The SELECT Masters programme starts from the concept of basic renewable energy sources (sun, wind, geothermal and Moon driven tides) to establish the environomical pathways towards a future sustainable energy system. SELECT curriculum rests on a strong foundation in thermal sciences, emphasising the thermodynamic tools of exergy and thermoeconomic analysis. The SELECT Master programme offers a unique education, at a high academic level. It is an integrated programme from five European top universities in the energy area, and prepares the students for a direct industrial engagement.

SELECT gives a two-semester advanced introduction to the overall environomical pathways concept at one university (KTH), and specially selected focus areas at four other universities (Politecnico di Torino, Helsinki University of Technology, Technische Universiteit Eindhoven, and Technical University of Catalonia) in the third semester. In the fourth (final) semester the students can perform the MSc thesis in an industrial setting in common supervision with researchers from any of the participating universities. The program offers extended industrial contacts as part of internships and seminars/workshops. The curriculum is highly integrated, first of all regarding to student and teacher mobility for certain common lectures, but also related to the extended use of remote teaching by the specialist teachers at all five universities, in conjunction with "face-to-face" and "virtual" interactive workshops and project courses. The program offers a unique, modern and highly interactive learning material which enhances the student learning process.

Website: www.kth.se/select

#### Partners<sup>1</sup>

ROYAL INSTITUTE OF TECHNOLOGY, Sweden (Co-ordinating institution) TECHNICAL UNIVERSITY OF TURIN, Italy EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands TECHNICAL UNIVERSITY OF CATALONIA, Spain HELSINKI UNIVERSITY OF TECHNOLOGY, Finland

#### Contact:

Torsten Fransson
Royal Institute of Technology
DEPARTMENT OF ENERGY TECHNOLOGY
Brinellvagen 68
10044 STOCKHOLM - Sweden
torsten.fransson@energy.kth.se

# SpaceMaster Joint European Master in Space Science and Technology

**Duration:** 1 year 8 months

### Course description:

Erasmus Mundus Master Course in Space Science and Technology – SpaceMaster, 120 ECTS opens opportunities for all highly qualified students around the world to study space science and technology at an advanced level at six excellent European and two leading third-country universities in a research-oriented environment. The educational cooperation is supported by the associated scientific and industrial organisations. This provides direct contacts with professional research and business sectors, including the following associated members:

Swedish Institute of Space Physics Swedish Space Corporation EISCAT Scientific Association Honeywell International s.r.o. EADS, Innovation Works

During two years of full-time studies the students obtain cross-disciplinary theoretical knowledge and practical skills by using the available scientific facilities such as radar systems, stratospheric balloons, robots, rockets and satellites. Specially organised study visits to European space companies help the students to establish direct contacts with space industry.

The Course consists of four semesters, each containing 30 ECTS. The 1<sup>st</sup> compulsory semester takes place at Julius-Maximilians Universität Würzburg. The 2<sup>nd</sup> compulsory semester takes place at Luleå University of Technology, Kiruna. During the 3<sup>rd</sup> semester the students choose a European partner university on the basis of their specialisation. During the 4<sup>th</sup> semester the students produce their Master thesis at the European and third-country partner universities. The thesis work is strongly connected with current space research and is performed in collaboration with the associated members and other international space organisations.

The Course is given in English. The Master Degree is achieved after successful accomplishment of 120 ECTS. The student who fulfil the requirements for the Master Degree receive a double Master Diploma, i.e. a Diploma certificate from Luleå University of Technology and a Diploma certificate from the second European partner university.

Website: www.spacemaster.eu

#### Partners:

LULEA UNIVERSITY OF TECHNOLOGY, Sweden (Co-ordinating institution) CZECH TECHNICAL UNIVERSITY IN PRAGUE, Czech Republic HELSINKI UNIVERSITY OF TECHNOLOGY, Finland JULIUS MAXIMILIAN UNIVERSITY OF WURZBURG, Germany CRANFIELD UNIVERSITY, United Kingdom UNIVERSITY OF TOULOUSE 3 PAUL SABATIER, France UNIVERSITY OF TOKYO GRADUATE SCHOOL OF SCIENCE, Japan UTAH STATE UNIVERSITY, United States

#### Contact:

Victoria Barabash
Department of Space Science
Luleå University of Technology
Box 812
981 28 KIRUNA Sweden
victoria.barabash@ltu.se

# SUFONAMA Sustainable Forest and Nature Management

**Duration:** 2 years

### Course description:

SUFONAMA is an integrated two-year world-class Masters Course in Sustainable Forest and Nature Management. The Course provides a top-level programme that qualifies graduates to deal with the huge challenges in Europe's - as well as other temperate regions' - pursuit of an evermore sustainable management of her natural resources, namely, that management of forests and nature areas must be seen in an integrated landscape context. To obtain the SUFONAMA double degree and the Diploma Supplement, students have to acquire 120 ECTS credits by studying at two Consortium institutions, acquiring at least 60 ECTS credits at each.

The Consortium consists of five institutions: (i) University of Copenhagen, Centre for Forest, Landscape and Planning, (ii) University of Wales, School of Agricultural and Forest Sciences, Bangor, Wales, UK, (iii) University of Göttingen, Faculty of Forest Sciences and Ecology, Göttingen, Germany, (iv) Swedish University of Agricultural Sciences, Southern Swedish Forest Research Centre, Alnarp, Sweden, and (v) University of Padua, Faculty of Agriculture, Padua, Italy. The SUFONAMA Course consists of a first year at one of three institutions (Bangor, Copenhagen, Göttingen) and a second year of specialisation at one of the other four institutions. Students are extensively exposed to reality/practice, that is, they are not only taught theory of forest, environmental and social sciences. Graduates are thus able to contribute to sustainable forest and nature management under the 'new' management paradigm. A full course description and the application procedure is found on www.sufonama.net.

Website: http://www.sufonama.net

#### Partners:

University of Copenhagen – Center for Forest, Landscape and Planning, Denmark (Co-ordinating institution)
University of Göttingen, Germany
University of Padua, Italy
Swedish University of Agricultural Sciences, Sweden

School of Environment and Natural Resources, University of Wales, United Kingdom

#### Contact:

Niels Strange UNIVERSITY OF COPENHAGEN CENTER FOR FOREST, LANDSCAPE AND PLANNING Rolighedsvej 23 1958 Frederiksberg C, DENMARK nst@life.ku.dk

# SUTROFOR Sustainable Tropical Forestry Erasmus Mundus Masters Course

**Duration: 2 years** 

# **Course description:**

This two-year Master's Course in Sustainable Tropical Forestry (SUTROFOR) is a world-class programme aimed at preparing qualified graduates to deal with contemporary tropical forestry. The programme is offered by a five university consortium consisting of the Royal Veterinary and Agricultural University, Centre for Forest, Landscape and Planning, Copenhagen (Denmark), the University of Wales, School of Agricultural and Forest Sciences, Bangor (UK), Dresden University of Technology, Institute of International Forestry and Forest Products (Germany), the Institute of Forestry, Agricultural and Environmental Engineering, Department of Tropical and Rural Forestry, Montpellier (France), and the University of Padova, College of Agriculture (Italy).

The Course consists of a year of study in one of three institutions (Bangor, Copenhagen, Dresden) followed by a second study year at one of the four other institutions. The aim of the first year is to provide a thorough and broad introduction to sustainable tropical forestry. This allows students to choose freely among the five specialisation options in the second year. The first year ends with the Joint Summer Module including field work in a tropical country. Specialisation options in the second year are agroforestry systems (Bangor), socio-economics of tropical forestry (Copenhagen), tropical forest management (Dresden), environmental management and policies for tropical forests (Montpellier), or ethics in forestry and responsible trade in tropical forest products and services (Padova).

The main language of instruction is English with a French option in Montpellier. Local language courses are available at all the partner institutions. Total student population is expected to be 150 (75 per year) giving a ratio of 5 students to every one faculty member. The teaching staff is very active in research and students profit from their global expertise.

The SUTROFOR Course offers an integrated study programme with a resulting double degree that is fully recognised in all the participating countries. Selection requires a strong Bachelor's degree, the applicant's CV, documentation of proficiency in English (and French if choosing Montpellier), the applicant's personal statement of motivation, and recommendations from two references.

Website: http://www.sutrofor.net

#### Partners:

University of Copenhagen – Faculty of Life Sciences, Denmark (Co-ordinating institution) University of Wales, Bangor, United Kingdom Dresden University of Technology, Germany Institute of Forestry, Agricultural and Environmental Engineering, France University of Padua, Italy

#### Contact:

Carsten Smith Hall University of Copenhagen Faculty of Life Sciences Rolighedsvej, 23 1958 Frederiksberg C, DENMARK cso@life.ku.dk

# TCCM Euromaster on Theoretical Chemistry and Computational Modelling

Duration: 2 years

### Course description:

Several Institutions from six EU countries launched in 2006 an International Master in Theoretical Chemistry and Computational Modelling, with two main objectives:

- to provide students with a sound background in this area
- to promote student mobility within a large network of research laboratories.

This Master was awarded the Eurolabel by the ECTNA in 2007. At the end of the Master the students will be prepared to apply and develop new methods and computational codes, and to follow future doctoral studies in Chemistry, Physics, Life Sciences or Materials Science. They will be also able to develop professional activities as experts in molecular design in the pharmaceutical, petrochemical and new-materials industry, or in any company as computational experts.

The student has to complete 120 ECTS credits in two years. In the first year (M1), 30 ECTS credits correspond to compulsory subjects in Mathematics, Statistical and Molecular Quantum Mechanics; Programming and Numerical Methods; Group Theory; Basic Reaction Dynamics; and Basic Spectroscopy, delivered at the local (national) level. This teaching will be offered in the official language of the home Institution (Dutch, French, Italian, Portuguese, Spanish) except for the Netherlands, where the teaching is offered in English. 25 ECTS credits of M1 correspond to free options in Advanced Chemistry and 5 ECTS to the study of a European language. The second year (M2) includes an International Intensive Course (24 ECTS) organized each year in a different country. The teaching (in English) will be focused on advanced Theoretical Chemistry and Computational Modelling (Advanced Electronic Structure and Condensed Matter Theory; Molecular and Chemical Dynamics; Advanced Computational Techniques; and Computer Modelling and Simulation) as well as on their applications in Nanoscience; Biological systems; Materials by design; Reactivity and Catalysis; Excited States; Atmosphere and Space. The second part of M2 is a Research Project (36 ECTS). A minimum of 24 ECTS out of these 36 ECTS together with the Intensive Course will correspond to student's mobility. The Master offers the possibility of carrying out this research activity in any of the research groups included in the consortium of 47 European Institutions which launched the Master in 2006. A Master Thesis must be defended at the end of the Master in the home Institution. The student will be entitled to a Master degree delivered by his home Institution and recognized by all the others in the Consortium.

Access requirements: Bachelor in Chemistry, Physics or Materials Science. Other scientific bachelors can be accepted, provided the student takes complementary courses under the supervision of his local Tutor.

Website: http://www.emtccm.org

#### Partners:

AUTONOMOUS UNIVERSITY OF MADRID, Spain (Co-ordinating institution) UNIVERSITY OF VALENCIA, Spain UNIVERSITY OF GRONINGEN, Netherlands CATHOLIC UNIVERSITY OF LEUVEN, Belgium UNIVERSITY OF PERUGIA, Italy UNIVERSITY PAUL SABATIER, TOULOUSE III, France UNIVERSITY OF PORTO, Portugal

#### Contact:

Manuel Yáñez
Autonomous University of Madrid
DEPARTAMENTO DE QUÍMICA C-9
Cantoblanco
28049 MADRID - Spain
manuel.yanez@uam.es

# THRUST Erasmus Mundus Masters Course in TurbomacHinery aeRomechanic UniverSity Training

**Duration:** 2 years

#### Course description:

Energy and propulsion are much needed systems in the world for most modern human activities and social development for a sustainable society. Turbomachines (1) produce more than 90% of all electricity in the world, (2) drive all commercial aircraft, (3) are used extensively as compressors, pumps, ... in many modern applications (refrigerators, ventilators, ...).

Aeromechanics is one of THE main limitations for more efficient, lighter, cheaper and reliable turbomachines, be it jet engines, steam turbines, gas turbines, wind turbines or hydro turbines, as well as various kind of compressors. No university worldwide has so far a Master program directly related to aeromechanics in turbomachines. The THRUST proposal will thus offer selected students a worldwide unique education, at a high academic level, from researchers/teachers at four European, and one US, top universities in the area and prepare the students for a direct industrial engagement.

The THRUST proposal offers the students a two semester advanced introduction to aeromechanics in turbomachines at one university (KTH) and four specially selected options (aerodynamics, mechanics, material, damping) at three other universities (Duke, Thessaloniki, Liège) in the third semester. In the fourth (final) semester the students can perform the MSc thesis in an industrial setting in common supervision with researchers from any of the participating universities.

The programme is highly integrated, first of all regarding student and teacher mobility for certain common lectures, but also related to the extended use of remote teaching by the specialist teachers at all four universities, in conjunction with "face-to-face" and "virtual" interactive workshops and project courses. The educational program THRUST offers a unique, modern and highly interactive learning material which enhances the student learning process. This, together with the "remote learning" aspects, will allow also for a substantial potential for already active industrial persons to participate in the full, or certain aspects of, the program as part of the life-long learning inside their respective companies.

Website: www.kth.se/thrust

### Partners:

ROYAL INSTITUTE OF TECHNOLOGY, Sweden (Co-ordinating institution) DUKE UNIVERSITY, United States UNIVERSITY OF LIEGE, Belgium ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece

### Contact:

Torsten FRANSSON KTH DEPARTMENT OF ENERGY AND TECHNOLOGY Brinellvagen, 68 10044 STOCKHOLM - Sweden Torsten.Fransson@energy.kth.se

#### **TPTI**

# Techniques, Patrimony and Industrial Territory: History, Valorisation, Didactic

Duration: 2 years

# Course description:

This Masters degree is intended for students seeking to advance their studies in heritage methodology, practice and teaching. It emphasises historical and field analysis and considers both pure research and action research. Teaching takes place in three centres of excellence: the Sorbonne (Paris), Padua (Italy) and Evora (Portugal).

#### The study programme:

TPTI is a two-year course. Admission is on the basis of cv and project, after which students are assigned a tutor in one of the consortium's three universities. The programme (120 ECTS credits) covers 1) three modules delivered on the three sites (80 ECTS credits); 2) language courses: French, English, Italian and Portuguese (10 ECTS credits); 3) placements and on-site report (5 ECTS), submission of a Master's dissertation in French or English (25 ECTS credits). European students may obtain scholarships for a 5-week course in a university which forms part of the network (TPTI-RI (UNICAMP, Brazil), (University of Ouagadougou, Burkina Faso), (Fudan, China), (UNAM, Mexico), equivalent to 5 ECTS (Cf. point 3/).

#### Course schedule:

The course begins in Paris (1<sup>st</sup> semester) and continues in Evora (2<sup>nd</sup> semester), followed by Padua (3<sup>rd</sup> semester), concluding with the dissertation (4<sup>th</sup> semester) in the university where the student's tutor teaches. Teaching is in French and English.

#### Entry requirements:

30 applicants are selected each year. The course is open to students holding a Bachelor's degree or equivalent. Experience in heritage work, museum practice, site management or restoration, or industrial archaeology is also strongly recommended. Fluent written and spoken French is essential (ALTE level 4 or 5) as is a good command of English (ALTE level 3 or 4).

### Qualifications, post-course openings:

On successful completion of the TPTI course, students will be awarded three diplomas and on Diploma Supplement. The course will give graduates access to PhD programmes, or to professional opportunities such as museum work, inventory taking, collection management, museum design, consultancy work in management and restoration of monuments and historic sites, cultural economics and engineering, communication and scientific and technical journalism.

Website: www.tpti.eu

#### Partners:

University of Paris I Pantheon-Sorbonne, France(Co-ordinating institution) University of Evora, Portugal University of Padua, Italy

#### Contact:

Anne-Françoise Garçon UNIVERSITE PANTHEON-SORBONNE (PARIS I) UFR d'Histoire,CH2ST Centre Mahler-Sorbonne 9 rue Mahler 75004 Paris, France afgarcon@univ-paris1.fr

# Troped European Master in International Health

Duration: 1 year

### Course description:

The field of International Health is concerned with health issues across regional and national boundaries, with a focus on poverty-related health problems and health systems. The Master course is based on the tropEd European Master of Science Programme in International Health, and is the result of a long-term collaboration of universities with vast expertise in International Health, starting in 1996. The main objective of the tropEd EMMC is to provide new graduates and experienced professionals with a unique learning experience that enable them to respond adequately and appropriately to the health needs and challenges facing populations in low, middle income and transitional countries. This one year programme, conducted by the University of Bordeaux 2 and taught in English, enables students to acquire a distinctive global perspective in providing training in seven European Institutions and three Third Country Institutions, each contributing with specific expertise in a particular area of International Health.

In addition, three partners from the professional and research sector are involved: Global Pharmaceutical company Sanofi Aventis; The Netherlands Red Cross Society; Institut Recherche Développement (IRD). The tropEd EMMC offers five study tracks for specialisation in one particular aspect of International Health: Track 1: Disease Control; Track 2: Health Systems, Health Policy & Management; Track 3: Sexual and Reproductive Health; Track 4: Child Health; Track 5: Health Research Methods. Mobility in two to three European and non European institutions will be offered to students per track. The consortium will deliver a coherent and integrated programme that combines the collective capabilities and experience of the participating institutions, which will enhance participant's capacity to formulate effective and appropriate responses to complex policy and practice issues. Students will be awarded a joint degree.

Website: http://erasmusmundus.troped.org

#### Partners:

UNIVERSITE BORDEAUX 2 VICTOR SEGALEN, France (Co-ordinating institution)
UNIVERSITY COLLEGE LONDON, United Kingdom
QUEEN MARGARET UNIVERSITY - EDINBURGH, United Kingdom
UNIVERSITY OF COPENHAGEN, Denmark
CHARITÉ MEDICAL SCHOOL BERLIN, Germany
UNIVERSITY OF BERGEN, Norway
FACULTY OF PUBLIC HEALTH, KHON KAEN UNIVERSITY, Thailand
NATIONAL INSTITUTE OF PUBLIC HEALTH, Mexico
UNIVERSITY OF CAPE TOWN, South Africa
ROYAL TROPICAL INSTITUTE AT FREE UNIVERSITY AMSTERDAM, Netherlands

### **Contacts:**

Pascal Millet

UFR Sciences Médicales, Institut de Santé Publique et de Développement – ISPED pascal.millet@u-bordeaux2.fr

Bénédicte Lang

Département des Affaires Européennes et des Relations Internationales – DAERI bureau2.europe@u-bordeaux2.fr

# VIBOT European Master in Vision and Robotics

Duration: 2 years

### **Course description:**

The European master on Computer Vision and Robotics strives to meet the present need for quality control and automation of industrial processes. It also confronts the increasing importance of medical imagery in the field of health. The course aims to provide professional qualifications for robotics, computer vision, image processing and medical imaging either in public laboratories or private research companies. The two-year programme proposed is divided into four semesters: the first semester is spent at the Heriot-Watt University (United Kingdom); the second semester takes place at the University of Girona (Spain); the third semester is hosted by the University of Burgundy (France); the fourth semester focuses on the master thesis carried out in a research lab or an enterprise involved in the consortium.

VIBOT students cover a wide range of study areas, learning the basics of signal and image processing and becoming familiar with the tools and methods of computer vision (compression, segmentation, real-time, shape recognition, 3D vision, etc). They will work on robotics and medical imaging. The final semester offers practical research experience in one of the laboratories of the university members of the consortium (for non-European students) or in a laboratory of a third-country university partner (for European students). Students may also choose to do a vocational training period. Companies such as BAE (UK), Barco (UK, Belgium), Luxscan (Luxembourg), IEE (Luxembourg), ORNL (USA), CSIRO (Australia), AREVA( Germany, France), Seebyte (UK), Continental (Germany, France)... are regularly hosting VIBOT students for Internships.

Each university articulates its offer of courses on the basis of its own approach, so that students benefit from different cultural and scholarly perspectives. Classes are taught in English by eminent researchers from the three laboratories: SIG/OSL at Heriot-Watt, VICOROB at Girona, Le2i at Le Creusot. An introduction to Scottish, Spanish and French culture and language is also offered to the students. The student population is between 30 and 40 each year, with an average professor/student ratio of approximately 1 professor to 5 students.

The Master's qualification (consisting of a joint certificate, a multiple degree and a diploma supplement) is awarded by all three universities, and countersigned by the consortium's director. Applicants must be of excellent academic standing, and possess a solid knowledge of English. Their motivation and the relevance of the programme to the student's professional intentions will also be taken into consideration.

Website: http://www.vibot.org

#### Partners:

University of Burgundy, France (Co-ordinating Institution) Heriot-Watt University, United Kingdom University of Girona, Spain

#### Contact:

Fabrice Meriaudeau
Université de Bourgogne
Centre Universitaire Condorcet
720, avenue de l'Europe
71200 Le Creusot, FRANCE
f.meriaudeau@iutlecreusot.u-bourgogne.fr

# VINIFERA EUROMASTER European Master of Science of Viticulture and Enology

**Duration: 2 years** 

### **Course description:**

Vinifera EuroMaster (European Masters of Viticulture and Enology) offers a gateway to positions worldwide for executives and managers in vine and wine sectors. Vinifera EuroMaster Allumini students will create a network of international experts diffusing European visions on wine, providing international knowledge of the sector in all its diversities and specificities.

This EMMC is organized by EMaVE Consortium composed of partners from 5 European countries:

- France (Montpellier SupAgro / ENITA de Bordeaux),
- Germany (Fachhochschule Wiesbaden, University of Applied Sciences / Geisenheim Research Center)
- Italy (Consorzio fra le Università degli studi di Udine / Padova / Verona ;

Consorzio fra le Università degli studi di Torino / Milano / Palermo / Foggia / Sassari),

- Portugal (Universidade Técnica de Lisboa, ISA / Universidade do Porto, Fac. de Ciências)
- Spain (Universidad Politécnica de Madrid, ETSIA).

Each of these partners universities have accreditation for a national Master Degree of Viticulture, Enology, and related Economic and Social Sciences. They deliver a joint degree after successful completion of Vinifera EuroMaster. Most lecturers and professors are experts and researchers in their disciplines thus guaranteeing high standard of education. Many lectures are given by professionals.

Vinifera EuroMaster is a two-year multidisciplinary Master course (120 ECTS). All the 32 students spend the first year in Montpellier, France; lectures are all in English. Second-year lectures are delivered in English in Germany and Portugal, but mainly in native languages in Italy and Spain. The curriculum includes elementary training of French, German and Portuguese; for students who choose Italy or Spain, B2 level in local language is required, but language preparation is provided.

First year program is composed of common study core modules delivered by lecturers, professors, researchers, from all EMaVE institutions. Modules are sequential, except for languages and Sensory Analysis. An initial immersion sequence facilitates students' integration and helps them make the final choice of hosting country in year 2. The final module is a study trip to various terroirs in different European countries.

Second year programs are mainly composed of elective modules (30 ECTS) allowing students to build a specialised curriculum fitted to their professional goals. The last Semester is devoted to the Master thesis preparation (30 ECTS).

Website: http://vinifera-euromaster.eu/

#### Partners:

MONTPELLIER SUPAGRO (INTERNATIONAL CENTRE FOR HIGHER STUDIES IN AGRICULTURAL SCIENCES), France (Co-ordinating institution)
TECHNICAL UNIVERSITY OF LISBON, Portugal
UNIVERSITY OF TURIN, Italy
UNIVERSITY OF UDINE, Italy
UNIVERSITY OF APPLIED SCIENCE WIESBADEN, Germany
TECHNICAL UNIVERSITY OF MADRID, Spain

#### Contact:

Gilles Lechapt Montpellier Supagro place Pierre Viala 2 34060 MONTPELLIER - France lechapt@supagro.inra.fr

# WOP-P Master on Work, Organisational and Personnel Psychology

**Duration:** 2 years

### **Course description:**

This Master's programme aims to prepare both European and non-European students to become competent practitioners in Work, Organisational and Personnel Psychology. It is offered by a consortium of five European universities: the University of Valencia (Spain), the University of Barcelona (Spain), Rene Descartes University Paris 5 (France), Bologna University (Italy), and the University of Coimbra (Portugal). The programme includes courses on work, organisational, and personnel Psychology, including theory and methodology, elective courses related to the field, a Joint Intensive Learning Unit (Winter School), a professional internship, and a final Professional Report integrating research and practice. Based on the "scientist-practitioner" model, this programme prepares practitioners through the acquisition of professional and research competences. It implements the main guidelines developed by the Euro-Psych model for the European Diploma of Psychology (EDP) supported by the European Federation of Psychology Association (EFPA). It also follows the Reference Model and Minimal Standards of the European Curriculum in WOP Psychology established by the European Network of Work and Organizational Psychology Professors (ENOP).

The duration of the Programme is two years. Each student will work for half of the programme at the institution where they are registered (home university). Students also have to study for at least a third of the Course in another partner institution located in a different country (host university). Any combination of "home" and "host" universities is possible, as long as the student spends time in two different countries.

The languages of instruction and examination are those of the countries where the universities are located (Spanish, French, Italian, and Portuguese), with the exception of the Joint Intensive Learning Unit (Winter School), where the language of instruction and examination is English. Some seminars and courses in the partner institutions may also be given in English. The size of the student population is about 75, and 75 teaching staff are involved in the programme. Teaching staff consists of well-recognised researchers and professionals from throughout the world.

Students will be awarded a double degree from their "home" and "host" institutions. The Master's programme qualifies students for the professional practice of Work, Organisational, and Personnel Psychology. As it is based on national laws regulating the psychologist profession, the titles awarded make it possible to practice the profession of psychologist in the field of WOP Psychology in the countries of the programme. Moreover, the Master's programme facilitates access to doctoral studies in this and related disciplines.

Admission criteria are a prior university degree in psychology, English language skills according to the common European Framework of reference for languages and fluency in at least one of the European languages of the consortium (Spanish, French, Italian, or Portuguese).

Website: http://www.erasmuswop.org

# Partners:

University of Valencia, Spain (Co-ordinating institution) University of Barcelona, Spain University of Bologna, Italy University of Paris Descartes, France University of Coimbra, Portugal

#### Contact:

José M. Peiró-Silla Department of Social Psychology University of Valencia Avda. Blasco Ibáñez, 13, 46010 Valencia, SPAIN erasmuswop@uv.es

# Erasmus Mundus Joint Doctorates

# ALGANT-DOC Joint Doctorate in Algebra, Geometry and Number Theory

**Duration:** 3 years

### Programme description:

The ALGANT-DOC joint doctoral programme was established after the positive experience of the integrated Erasmus Mundus Masters Course in Algebra, Geometry and Number theory. The programme is a collaborative scheme creating ideal conditions for the production of high-level research under joint supervision at, at least, two partner institutions among the universities of Bordeaux, Chennai, Leiden, Milan, Montreal, Padua and Paris Sud.

Supervision will be provided by staff who are very active in research and the doctoral candidates will profit from the many links staff enjoy with research centres throughout the world. Research activities will be carried out in well-equipped and welcoming facilities. The mathematics departments and doctoral schools, which will host the doctoral candidates organise regular seminars and conferences specifically aimed at young researchers.

Doctoral candidates who will have successfully completed the programme will be awarded a double degree, and/or a joint degree composed of two nationally recognised doctoral degrees issued by two consortium institutions, completed by a diploma supplement.

Website: http://www.ALGANT.eu/

#### Partners:

UNIVERSITY OF BORDEAUX 1, France (Co-ordinating institution) CHENNAI MATHEMATICAL INSTITUTE, India UNIVERSITY OF LEIDEN, Netherlands UNIVERSITY OF MILAN, Italy CONCORDIA UNIVERSITY, Canada UNIVERSITY OF PADUA, Italy UNIVERSITY OF PARIS SOUTH 11, France

#### Contact:

Boas Erez INSTITUT DE MATHÉMATIQUES DE BORDEAUX Université Bordeaux 1 33405 TALENCE - France boas.erez@math.u-bordeaux1.fr

# **EDLE European Doctorate in Law and Economics**

**Duration:** 3 – 4 years

# Programme description:

The European Doctorate in Law and Economics (EDLE) is an excellence Ph.D. programme open to economists and lawyers of high promise preparing themselves for a career in academia or for responsible positions in government, research organizations, and international consulting groups.

The EDLE educational project is carried out in a strong relationship with the research activities of the partners involved: the Department of Economics of the University of Bologna, the Institute of Law and Economics of the University of Hamburg, and the Rotterdam Institute of Law and Economics. The Indira Gandhi Institute of Development Research (IGIDR) of Mumbai (India) cooperates with the programme by providing research opportunities to interested candidates.

The educational programme requires students to visit all three partner universities.

In the first year, from October to May, students stay in Bologna where they attend courses in analytical and quantitative methods. From June to July, they stay in Hamburg, where they attend a 3-week intense Summer school held by international visiting scholars.

In the second year, from October to March, students stay in Rotterdam, where they participate in dedicated workshops. Candidates who specialize in development law and economics may spend one or two semesters at the IGIDR in Mumbai.

Research topics include all major fields of law and economics, with special emphasis on issues related to contracts, torts, intellectual property, competition, corporate governance, capital markets law, and behavioural law and economics.

The programme is held in English. As a complement to the basic curriculum, students are offered introductory courses in national languages and in the national legal systems (Italian, German and Dutch). Interested students may carry out short interships at the numerous business associates of the network.

#### Curriculum

The curriculum of the programme is devised to provide advanced and challenging education both to lawyers and economists. Students will be able to choose between basic and advanced courses depending on their educational background. In the first year, students with a legal background will attend courses at an introductory level in: Mathematics, Game theory, and Statistics, while students with an economics background will attend advanced courses in: Microeconomics, Econometrics, Financial Economics.

All students will also take a brief introductory course on the Italian legal system, and the following dedicated courses, covering the core topics of the programme: Economic analysis of European competition law and IPRs, Game theory and the law, Modelling European private law, Experimental and behavioural law and economics, European securities and company law.

In Hamburg, students will take a brief introductory course on the German legal system and will attend a Summer School held by international scholars, on topics of special interest.

In the first half of the second year, students will take a brief course on the Dutch legal system and will participate in dedicated workshops where they present their work. From the second semester of the second year, students will reside at one of the partner univerities, where they receive specialized supervision.

Each student is assigned two supervisors, generally an economist and a lawyer.

#### Degree

After *three* years doctoral candidates may defend their thesis and obtain the joint doctoral degree "European Doctorate in Law and Economics" issued by the Universities of Hamburg and Bologna, with the cooperation of the University of Rotterdam.

Alternatively, after *four years*, candidates may defend their thesis and obtain the joint degree of Bologna and Hamburg, and the Doctor of Philosophy degree from the Erasmus University of Rotterdam.

#### **Eligibility**

Admission to the programme is open to applicants who received a diploma or a bachelor and master degree in law or economics, or a comparable university degree (second cycle qualification) required by the partner universities for admission to doctoral studies.

# Application

Applications for "Category A" Mundus scholarships should be received by the end of December; all other applications should be received by the end of April.

Applications shall include:

- 1) CV with information on academic, professional and other education;
- 2) two reference letters:
- 3) a letter of motivation with a prospective research proposal and,
- 4) a certificate of English proficiency.

Successful applicants are expected to have a good training in the economic analysis of law. Basic knowledge of calculus and microeconomics is assumed.

# Information for applicants

For information about faculty, curriculum, entry requisites, facilities, etc., please check the website: www.edle-phd.eu

If you need additional information, please contact the EDLE secretarial staff: dse.edle@unibo.it

Website: www.edle-phd.eu

#### Partners:

UNIVERSITY OF BOLOGNA, Italy (Co-ordinating institution) ERASMUS UNIVERSITY ROTTERDAM, Netherlands UNIVERSITY OF HAMBURG, Germany

#### Contact:

Luigi A. Franzoni EDLE Mundus Director, Department of Economics, Piazza Scaravilli, 2 40126 BOLOGNA - Italy dse.edle@unibo.it

#### **EMJD-GEM**

# Erasmus Mundus Joint Doctorate on "Globalization, the EU & Multilateralism"

**Duration:** Individual Fellowships will cover 3 years. The overall programme is scheduled to last 6 years

#### Programme description:

The Erasmus Mundus Joint Doctorate on "Globalisation, the EU, and Multilateralism" (EMJD-GEM) seeks to formulate a distinctively European response to the challenges facing the contemporary global system. With this in mind, a unique set of 9 leading research institutions from across the globe have been brought together. Besides the coordinating Institut d'Etudes Européennes at the Université Libre de Bruxelles (IEE-ULB), itself a Jean Monnet Centre of Excellence; the EMJD-GEM consortium includes two more centres of excellence in EU studies – the Institut Européen at the Université de Genève (UNIGE) and the Centre for European Studies at Fudan University in Shanghai; as well as three major Political Science departments – PAIS at the University of Warwick, IAPS at Waseda University in Tokyo, and the Political Theory Faculty at the LUISS in Rome. Furthermore, the consortium also includes three distinguished associated institutions, namely Boston University in the US; UNU-Cris in Bruges, and ITAM in Mexico.

First and foremost, the **GEM PhD School** is a bridging exercise between various disciplines within the Social Sciences, most notably: Political Theory, Comparative Politics, International Relations, EU and other Area Studies. Above all, the program seeks to foster an innovative and mutually-beneficial dialogue between IR and EU Studies. The **GEM PhD School** will thus answer a growing call for international doctoral programs characterized by their excellence, their inter-disciplinarity, and their networked nature. As an organizing principle behind the research accomplished within EMJD-GEM; and with an eye on each partner institution's relative strengths; three *Jointly Executed Research Projects* (Jerps), have been identified. These 3 overarching Jerps provide the programme with its overall structure:

- **JERP 1: MORGANITE** Coordinated by the IEE-ULB "Multilateral Organizations, Regionalism, and global Governance: Institutions and The EU"
- JERP 2: CITRINE: Coordinated by the University of Warwick
   "Cooperation shaping International & Transnational Regulatory Interests & the Role of the EU"
- JERP 3: AMETRINE Coordinated by the LUISS
   "Analysis of Multilateral, European and other Regional Initiatives as Normative Endeavors"

As a doctoral program, the **GEM PhD School** is at the cross-roads between research and teaching. For one, the EMJD-GEM consortium will guarantee the recognition of their integrated programs and award a double degree following the completion of a jointly supervised doctoral dissertation. Mobility is the program's second salient feature. During their three year doctoral fellowship each doctoral student will be awarded a visiting research fellowship within a second partner HEI besides their first HEI of enrolment. Also, the existing annual GARNET PhD seminars on "Global Governance, Regionalism & the EU" are integrated within the programme thus providing a further academic resource to all associated researchers. Finally, the **GEM PhD School** also offers a set of specialized methodological and theoretical doctoral courses – on offer in both English and French – aimed at providing all enrolled candidates with a shared, yet flexible and outstanding formative curriculum.

Website: www.erasmusmundus-gem.eu

#### Partners:

FREE UNIVERSITY OF BRUSSELS (ULB), Belgium (Co-ordinating institution) WASEDA UNIVERSITY, Japan UNIVERSITY OF WARWICK, United Kingdom FREE UNIVERSITY FOR SOCIAL STUDIES LUISS, Italy UNIVERSITY OF GENEVA, Switzerland FUDAN UNIVERSITY, China

#### Contact:

GEM PhD School Secretariat INSTITUT D'ETUDES EUROPEENNES Avenue F.D. Roosevelt 39 (CP 172) 1050 BRUSSELS - Belgium Garnet.ulb.iee@gmail.com

# **ENC Network European Neuroscience Campus network**

**Duration:** 3 years (5 consecutive editions)

## Programme description:

Brain disorders are among the most prevalent and debilitating diseases. Because most major brain disorders are chronic, an individual's quality of life and socio-economic prospects are dramatically impaired. Increased life expectancy further raises the impact of brain dysfunction on society. In the coming decades this burden is expected to grow into one of the most pressing and costly problems of the EU. Prevalent neurological and psychiatric diseases are typically caused by the interplay of environmental factors and genetic variations in multiple genes. Genetic variation is currently being identified by large international efforts to genotype patient populations. Scientific research should now aim at generating integrative neuroscience work-packages as a next step to identify interactions between genetic variations and environmental factors and to reveal how these translate into brain diseases.

To succeed, a *new generation of neuroscientists is needed*, capable of integrating information across different levels of research, from genes and proteins to synapses, and from networks up to complex brain (dys)function. In order to boost future multidisciplinary brain research in Europe, the programme offers a stimulating, multidisciplinary training environment for young neuroscientists to prepare them for future challenges in neuroscience research. Training in complex trait analysis and integrative neuroscience ensures first-class career opportunities and prospects to become future leaders in neuroscience. The **ENC Network joint doctorate programme** aims at integration and translation from bedside-to-bench and from bench-to-bedside as the key guides in training and in research approach.

The strategic objectives of the ENC joint PhD programme are to provide research-training by (a) focusing on a basic understanding of brain disease mechanisms, (b) developing the knowledge base, tools and resources needed to decipher the function of genes and gene products, neuronal networks and inter- and intracellular processes relevant to human health and (c) bilateral translational links between lab and clinic (and back). The five ENC Network home-institutes all have a long and established track record in PhD training in the field of molecular, cellular and integrative neurosciences. The key training objectives are to offer: 1) scientific training with innovative and multidisciplinary brain research methodology (task Academic Partners); 2) advanced technology courses (task Academic Partners); 3) training through original research aimed at the translation from bedside-to-bench and from bench-to-bedside (task PhD supervisors); 4) academic skills training (task of associate partners); 5) training in Technology Transfer methods (task of associate partners, including two SMEs)

Website: www.enc-network.eu

#### Partners:

NEUROSCIENCE CAMPUS AMSTERDAM, VU UNIVERSITY AMSTERDAM, Netherlands (Coordinating institution)
CENTRE FOR NEUROSCIENCE AND CELL BIOLOGY, Coimbra Portugal
NEUROSCIENCE CENTER ZURICH, Switzerland
EUROPEAN NEUROSCIENCE INSTITUTE GÖTTINGEN, Germany
BORDEAUX INSTITUTE OF NEUROSCIENCE, France

#### Contact:

Arjen Brussaard - Director programme
Neuroscience Campus Amsterdam
VU University Medical Center
De Boelelaan 1087
1081 HV AMSTERDAM - Netherlands
arjen.brussaard@neurosciencecampus-amsterdam.nl

#### EteTCoS<sup>3</sup>

# **Environmental Technologies for Contaminated Solids, Soils and Sediments**

**Duration:** 3 years

# Programme description:

The Environmental Technologies for Contaminated Solids, Soils and Sediments (ETeCoS³) EMJD programme provides education and research at PhD level, training its doctoral candidates to think globally and co-work in multidisciplinary research teams. This will make ETeCoS³ PhD alumni attractive scientists/engineers for European universities, institutes and industry.

The ETeCoS³ EMJD is centered around three key topics in environmental pollution: i) heavy metals, ii) recalcitrant organic pollutants and iii) contaminated solids. The EMJD focuses on fundamental and applied aspects to treat and remove these pollutants as well as on the development of recovery and reuse technologies with market potential. There will be a close connection to practical problems, as for example hot spots in the Balkans, brown fields in the Czech Republic and sediments and soils polluted by mining activities in Minas Gerais (Brazil).

ETeCoS³ is a multidisciplinary and inter-sectoral consortium coordinated by the University of Cassino, composed of 3 partner organisations (University Cassino - Italy, University Paris-Est - France, UNESCO-IHE - The Netherlands), 12 academic associated members, 3 professional associations and 1 SME associated member, from 10 different countries, including 3 third-countries. ETeCoS³ encompasses 3 national Doctoral Schools (SENSE - the Netherlands, RECETO - Denmark and Higrade - Germany). All members of the ETeCoS³ partnership are recognized internationally, with long-standing track records in research and higher education.

The education/training of the ETeCoS<sup>3</sup> PhD students (45 ECTS) will be detailed in an Individual Training and Supervision Plan, comprising mandatory and elective PhD courses organised by partner organisations and associated members, an annual PhD meeting and summer school, courses on research, management and transferable skills as well as language training.

The research plan will be laid down in a PhD proposal, detailing research work (135 ECTS), including secondments (60 ECTS). ETeCoS<sup>3</sup> doctoral candidates will perform research in at least 3 countries. Supervision will be done in co-tutelle arrangements, providing doctoral candidates with a supervisory team of at least 3 co-supervisors from the visited organisations.

The PhD dissertation and defence will be in English and PhD students are required to publish in peer reviewed journals. Successful completion of the PhD programme will be awarded a fully recognized and accredited joint Doctoral Degree in Environmental Technology.

Website: www.internationaldoctorate.unicas.it

### Partners:

UNIVERSITY OF CASSINO, Italy (Coordinating institution)
UNIVERSITY OF PARIS EST, France
UNESCO-IHE INSTITUTE FOR WATER EDUCATION, Netherlands

#### Contact:

Giovanni Esposito
University of Cassino
DIPARTIMENTO DI MECCANICA, STRUTTURE, AMBIENTE E TERRITORIO (DIMSAT)
via di Biasio 43
03043 CASSINO (FR) - Italy
giovanni.esposito@unicas.it

# EUROPHOTONICS Doctorate Program in Photonics Engineering, Nanophotonics and Biophotonics

**Duration:** 3 years

# Programme description:

The Joint Doctorate Program on Photonics Engineering, Nanophotonics and Biophotonics is dedicated to address recent challenges of one of the most expanding fields in physics and material sciences. This doctorate program is based on a consortium of excellence research institutes and universities in the field: Paul Cézanne Aix Marseille III University / Institut Fresnel (France), Universität Karlsruhe (TH) / Karlsruhe School of Optics & Photonics (Germany), Universitat Politecnica de Catalunya, ICFO (Insitut de Ciences Fotoniques) (Spain), and Universita degli Studi di Firenze / LENS (European Laboratory for Non-Linear Spectroscopy) (Italy). The goal of the program is to involve doctorate students in cutting-edge research projects profiting from the complementarity between the five partners, and from a wide range of research training and teaching plans that includes fundamental and general sciences, technology, languages and communication, research and industrial management, technology transfer, career exploratory support, international meetings, workshops and conference participation. Several key issues will be implemented to bring to the students a complete and valuable training: co-supervision, exchanges within the local and the international research environment, training in working methods in technical, scientific and management issues, communication and regular scientific presentations at local and international scales.

This program is dedicated to students with a masters in Physics, Engineering, Biology, Biotechnologies, selected based on their scientific level and the identified project proposed within the consortium. The students will work under a co-tutelle supervision in at least two collaborative laboratories among the partners. At least one semester will be spent in each of the co-supervising institutions. The students will have to demonstrate excellent research and follow two weeks of training units per semester to obtain a doctorate multiple diploma after their thesis defense.

The doctorate projects will focus on advanced research in Photonics and interdisciplinary applications. PhD students will be able to pursue a career on today's new challenges in either academic or applied research: monitoring and controlling matter and optical phenomena at the ultimate nanometric scale, providing new imaging tools for fundamental understanding of biological processes and clinical applications, bringing original tools in line with future optical devices.

Website: www. europhotonics.org

#### Partners:

UNIVERSITY AIX-MARSEILLE III PAUL CEZANNE, France (Co-ordinating institution) EUROPEAN LABORATORY FOR NON-LINEAR SPECTROSCOPY, Italy TECHNICAL UNIVERSITY OF CATALONIA, Spain UNIVERSITY OF KARLSRUHE, Germany INSTITUTE FOR PHOTOTONIC SCIENCES, Spain

### Contact:

Sophie Brasselet Institut Fresnel, Domaine universitaire St.-Jerome 13397 MARSEILLE - France sophie.brasselet@fresnel.fr

# EuroSPIN European Study Programme in Neuroinformatics

Duration: 3 – 4 years

## Programme description:

The human brain is by far the most intricate and complex organ known. With 10<sup>11</sup> neurons and 10<sup>15</sup> connections, it effortlessly performs operations that far exceed the capability of any computer. Understanding how it achieves this will revolutionise science, health care and technology. Radical improvements in experimental methods are transforming the study of the brain into a data rich discipline, which requires the emerging discipline of neuroinformatics. Neuroinformatics combines neuroscience and informatics research to develop and apply computational tools and approaches that are essential for understanding the structure and function of the brain. Neuroinformatics thus forms an essential foundation for current and future brain research, and is critical both for basic research into brain function and biomedical research aiming at finding treatments for neurological and psychiatric diseases. Understanding the brain is also expected to have far reaching implications for information technology.

The objective of this doctoral training programme is to provide top quality training for PhD students within the neuroinformatics area. Four partners participate:

- Kungliga Tekniska Högskolan, Sweden
- University of Edinburgh, UK
- National Centre for Biological Science, India
- Albert-Ludwigs-Universität Freiburg, Germany

These four partners are research leaders in the neuroinformatics field, but they have complementary strengths. Each PhD candidate will pursue an interdisciplinary research project leading to a joint or a double PhD degree from two universities. The mobility periods, as well as the courses a student will follow, are planned based on which constellations of partners are involved. During the whole PhD period, which is a maximum of four years, the student will have visited all partners during an annual workshop in which all students and most of the supervisors participate. During the PhD period each student has one main supervisor from each of the two universities that grant the PhD degree. In addition to providing for the training within the field of neuroinformatics, all students are also offered training in secondary skills. The instruction language within the programme is English, and English scientific writing courses are offered, as are courses in the local languages in the different countries.

Course website: www.kth.se/EuroSPIN

#### Partners:

KTH ROYAL INSTITUTE OF TECHNOLOGY, Sweden (Co-ordinating institution)
ALBERT-LUDWIG UNIVERSITY OF FREIBURG, Germany
UNIVERSITY OF EDINBURGH, United Kingdom
NATIONAL CENTRE FOR BIOLOGICAL SCIENCES, TATA INSTITUTE OF FUNDAMENTAL
RESEARCH, India

#### Contact:

Jeanette Hellgren Kotaleski Royal Institute of Technology, Dept. Computational Biology, School of Computer Science and Communication, AlbaNova University center 106 91 STOCKHOLM - Sweden jeanette@csc.kth.se, mundus-eurospin@kth.se

# FONASO Forest and Nature for Society

**Duration:** 3 years

### Programme description:

'Forest and Nature for Society' (FONASO) is a three-year world-class global Erasmus Mundus Joint Doctoral Programme. The main objective of the Programme is to educate the leaders of the future generation of researchers, teachers and top management staff working with sustainable forest and nature management, in both tropical and temperate regions, to ensure wider societal benefits. Within forest and nature management, the Programme is focused on the scientific fields of (i) economics and policy, and (ii) ecology and silviculture. Emphasis is on applied research.

The FONASO Consortium includes globally top ranked universities and leading international research organisations. The Consortium consists of the twelve partner institutions: (i) University of Copenhagen, Denmark, (ii) The Swedish University of Agricultural Sciences, Sweden, (iii) Bangor University, UK, (iv) Technical University of Dresden, Germany, (v) University of Göttingen, Germany, (vi) AgroParisTech, France, (vii) University of Padova, Italy, (viii) Center for International Forestry Research, Indonesia, (ix) Dalhoff Larsen & Hornemann, Denmark, (x) James Cook University, Australia, (xi) University of British Columbia, Canada, and (xii) World Agroforestry Centre, Kenya.

The FONASO Programme is a fully integrated three-year doctoral programme. It builds on existing research schools and environments, taking the best from each to build up joint supervision, activities and doctoral candidate courses. There is only one joint call, application, assessment and admission procedure. Short-listed applicants are invited to Europe to present and discuss their proposals. There are standard descriptions of all activities to ensure transparency across the many partner institutions. Doctoral candidates obtain either a joint degree or double degree depending on mobility track. The language of the Programme is English.

Website: www.fonaso.eu

#### Partners:

UNIVERSITY OF COPENHAGEN, Denmark (Co-ordinating institution)
SWEDISH UNIVERSITY OF AGRICULTURAL SCIENCES, Sweden
BANGOR UNIVERSITY, United Kingdom
TECHNICAL UNIVERSITY OF DRESDEN, Germany
UNIVERSITY OF GÖTTINGEN, Germany
INSTITUTE FOR LIFE SCIENCES AND THE ENVIRONMENT, AgroParisTech, France
UNIVERSITY OF PADOVA, Italy

#### Contact:

Carsten Smith-Hall University of Copenhagen, Faculty of Life Sciences Forest and Landscape, Rolighedsvej 23 1958 FREDERIKSBERG C - Denmark cso@life.ku.dk

# ICE Interactive and Cognitive Environments

**Duration:** 3 years

## Programme description:

The Joint Doctoral Programme in Interactive and Cognitive Environments offers PhD candidates an education programme in the field of research related to computer science, electronic and telecommunication engineering and industrial design. Candidates must hold a Master of Science (M.Sc.) degree or equivalent title and in-depth knowledge and understanding of the principles of ICT engineering.

ICE aims at developing and enhancing master students' knowledge and skills in order to shape a new generation of professionals able to exploit (and further enhance) cutting-edge ICT technologies to design and implement - in multi-disciplinary work teams - innovative solutions in the ever more pervasive fields of application.

The programme has three major focuses that will be iteratively pursued during the whole progress of the candidate's track. The first concerns the acquisition and the formalization of knowledge in specific advanced domains, achieved through lectures and seminars. The second aims at keeping PhD students in strict touch with leading research groups that have proven experiences in research activities in basic disciplines necessary for the PhD course in the five partner universities. The third involves actual industry/academy joint research activities on projects in cooperation with leading ICT companies, typically under international institutional umbrellas, such as the European Research Frameworks.

The programme lasts three years. During this period a mobility scheme ensures that students will spend training / research periods in at least two different higher education institutions.

The language of instruction is English. Local language learning and integration in the society will be promoted through ad-hoc courses and university staff support.

The ICE PhD Course will represent added value for PhD students from inside and outside Europe in several respects:

- ICE involves five top level universities and field-related research groups from 5 European countries;
- ICE awards joint/double degrees by university pairs, internally following the same educational
  organization framework and common macro-objectives, that will allow PhDs the highest
  possibility of adequate and recognized job placement, fully exploiting acquired and certified
  research attitudes and achievements in a strengthened European High Tech market;
- ICE provides an organized higher-education European network, associated with the ICE brand, for additional cultural offer, logistic facilities, direct interaction with European industries (SMEs and large European industries) under a joint transnational quality control committed to continuous improvement.

Website: http://www.icephd.org

#### Partners:

UNIVERSITY OF GENOA, Italy (Co-ordinating institution) UNIVERSITY OF KLAGENFURT, Austria QUEEN MARY UNIVERSITY OF LONDON, United Kingdom TECHNICAL UNIVERISTY OF CATALONIA, Spain EINDHOVEN UNIVERSITY OF TECHNOLOGY, Netherlands

#### Contact:

Carlo Regazzoni / Lorenzo Ciardelli University of Genoa Via all'Opera Pia 11A 16145 GENOVA - Italy carlo@dibe.unige.it / ciardelli@dibe.unige.it )

# IDS-FUNMAT International Doctoral School in Functional Materials for Energy, Information Technology, and Health

**Duration:** 5 years

#### Programme description:

*IDS-FunMat* is an International joint Doctoral School in Materials Science, specialising in **Functional Materials for Energy, Information Technology and Health**.

*IDS-FunMat* combines a well-structured, interdisciplinary training programme with high quality research work in leading laboratories from **nine universities in five countries**: University Louvain, University Liege (both Belgium), University Waterloo (Canada), University Bordeaux 1, Grenoble INP, UPCM Paris, University Caen (all France), TU Darmstadt (Germany) and IST Lisbon (Portugal).

*ISD-FunMat* intends to become a permanent reference model for **international doctoral studies in Materials Science** and beyond. Students will carry out their research work over three years in two universities from different countries, with additional mobility to industry in most projects. Joint training schools will cover both scientific topics and transferable skills, such as project management, communication, and negotiation techniques. *IDS-FunMat* will initially award double degrees; however, a '**Joint Degrees Task Force**' will study pathways to implementation of Joint Degrees.

The **research projects** will address the field of materials -from nano to macro-scale- dealing with some of the key technological challenges of our time, namely:

- **Energy and environment**: production, storage and conversion (e.g. batteries, solar cells, thermoelectrics, fuel-cells, CO<sub>2</sub> conversion, etc....)
- **Information Technology**: integrated components (e.g. information processing, agile devices, optoelecronics, multiferroics, etc......)
- **Health:** e.g. tissue engineering, implants/prosthesis, imaging, diagnosis, therapy and drug delivery, etc....)

The **consortium partners** assembled in *IDS-FunMat* have a high international reputation in the research fields described above. They complement each other very well in their specialisation fields of research, and in the corresponding training offers. The first language of all training and research activities will be English, but students will receive free tuition in local languages.

Our Consortium has a **strong track record** of participation in international projects for research and education, in particular with each other. Five consortium members already collaborate in the ERASMUS MUNDUS FAME-Master Programme www.fame-master.com

The majority of partners were also participants in the European Network of Excellence FAME (2004-8), its successor EMMI, the European Multifunctional Materials Institute, and several spin-off EU Research Projects. Around 15 jointly supervised PhD projects have already been created since 2005 www.emmi-materials.eu.

IDS-FunMat is supported financially and organisationally by 17 Associated Members: Five Regional Governments (Aquitaine, Basse-Normandie, Rhone-Alpes, Hessen, Wallonie), five large European **industry** companies (Bosch, Corning, Merck, Schneider, Rhodia) who already collaborate in the EMMI Industry Support Group, as well as the Canadian CMC Industry Group and the medium-sized enterprises Physiol, Kitosyme. The list of Associated Members is completed by MDP Consulting, EMMI, the CNRS and the Fraunhofer Society.

Website: http://www.IDSFUNMAT.u-bordeaux1.fr

### Partners:

UNIVERSITY OF BORDEAUX 1, France (Co-ordinating institution) HIGHER TECHNICAL INSTITUTE, Portugal TECHNICAL UNIVERSITY OF DARMSTADT, Germany UNIVERSITY OF PARIS 6 PIERRE ET MARIE CURIE, France UNIVERSITY OF CAEN - LOWER NORMANDY, France GRENOBLE INSTITUTE OF TECHNOLOGY, France UNIVERSITY OF WATERLOO, Canada UNIVERSITY OF LIEGE, Belgium CATHOLIC UNIVERSITY OF LOUVAIN, Belgium

# **Contact:**

Laurent Servant
ECOLE DOCTORALE DES SCIENCES CHIMIQUES
351 Cours de la Libération
33405 BORDEAUX - France
I.servant@ism.u-bordeaux1.fr

# INTERZONES Cultural Studies in Literary Interzones

**Duration:** 3 years

### Programme description:

The purpose of INTERZONES is to prepare gifted doctoral students to become the "global academics" which top universities seek out in the fields of European comparative literatures and cultural studies, or high-flying consultants in private business sectors interested in global cultural phenomena.

By investigating culture with innovative and transcultural methods, global professors are no longer 'outside' the socio-economic world, but participants in a social texture that includes complexity. At Kalin's, for instance, a tavern where a yellow line is painted on the floor to delineate the frontier between Slovenia and Croatia, how does Europe exist? Kalin is also part of a bigger venue, full of life, both a cultural space and an interzone.

Whether imperialist, colonialist or, on the contrary, shrivelling as a result of its morbid fascination with the Void, Europe is often defined only in terms of its limits and contours. The conceptual tools (such as identity, otherness, difference, colonization, entropy, etc.) with which artistic and literary productions are analyzed have tended to reproduce, or even to produce, a pre-existing idea of what it might mean to have (or not have) a nation, an ethnicity, a personality, a "Europe". The failure to nourish and galvanize what could have been a renewal of the Republic of Letters may stem from a simple fact: such tools have simply become obsolete. Cultural studies can be a vital and elegant means not only of conceptualizing communication beyond the automatisms of common conceptualizations, but also as a means to ask HOW communication within and beyond various entities such as personality, ethnicity, and nation... can be renewed and reinvented.

The languages of tuition are French and English. A minimum of 3 European languages is required from the candidates to make them truly competitive in the field of comparative literature and visual culture. Language facilities will be made available to students in each university, at no extra cost.

Student mobility during the 6 consecutive semesters will include 3 or 4 universities, whereby European students will study in AT LEAST one non-European institution.

- 1) All students go to Bergamo for the first semester to discover the latest theoretical approaches in "Cultural Migrations".
- 2) Students opt for two main degree-awarding institutions out of the five partners: Tübingen, Bergamo, Perpignan and either Universidade Federal Fluminense, Brazil or Jawarhal Neru University, India, in which they will spend two consecutive semesters in each: 2 & 3 and then 5 & 6.
- 3) Depending on the research profile, semester 4 will be spent in one of the other partner institutions, be it a third or fourth partner or one of our associate members: Aix, Barcelona, Brown, Buenos Aires, Cracaw, Mexico, Paris Sorbonne Nouvelle 3, Paris 10, Sydney, St Petersburg or Zürich.

(Names of universities are indicative, as in each case it is specialized research centres, described elsewhere, that welcome students to carry out their research). Out of 180 ECTS credits, 120 are devoted to the PhD thesis itself, and 60 are gained through a choice of multi-task activities aimed at enhancing the employability of future global academics.

Successful PhD students will then be awarded a fully-recognized double degree from their two main institutions, in addition to diploma supplements certifying their achievements in their 3<sup>rd</sup> / 4<sup>th</sup> doctoral school(s).

Website: http://www.mundusphd-interzones.eu

#### Partners:

UNIVERSITY OF BERGAMO, Italy (Co-ordinating institution)
JAWAHARLAL NEHRU UNIVERSITY, India
UNIVERSITY OF PERPIGNAN, France
FLUMINENSE FEDERAL UNIVERSITY, Brazil
EBERHARD KARL UNIVERSITY OF TÜBINGEN, Germany
UNIVERSITY OF PROVENCE AIX-MARSEILLE 1, France
HERMENEIA GROUP – UNIVERSITY OF BARCELONA, Spain
THE GRADUATE SCHOOL OF BROWN UNIVERSITY, U.S.A.
ENTRE RIOS NATIONAL UNIVERSITY, Argentina

# **Erasmus Mundus Joint Doctorates**

THE JAGIELLONIAN UNIVERSITY in CRACAW, Poland

THE IBEROAMERICAN UNIVERSITY, Mexico

THE NEW SORBONNE UNIVERSITY - PARIS 3, France

THE WESTERN UNIVERSITY - PARIS 10, France

THE EUROPEAN UNIVERSITY OF PETERSBURG, Russia

THE UNIVERSITY OF SYDNEY, Australia

THE UNIVERSITY OF ZURICH, Switzerland

#### Contact:

Didier Girard Università degli Studi International Office Via dei Caniana,2 24127 BERGAMO - Italy interzones.phd@unibg.it

# IRAP PhD International Relativistic Astrophysics Doctorate Program

**Duration:** 3 years

### Programme description:

Following the successful scientific space missions by the European Space Agency (ESA) and the European Southern Observatory (ESO) in Chile, as well as the high-energy particle activities at CERN in Genève, IRAP is a Ph.D. program dedicated to the formation of scientists in the field of relativistic astrophysics. The students of such a program will lead the theoretical developments of one of the most active fields of research, based on the above observational and experimental facilities. This program needs expertise in the most advanced topics of mathematical and theoretical physics, and in relativistic field theories. It requires the ability to model the observational data received from the above facilities, as well as all the basic knowledge in astronomy, astrophysics and cosmology. This activity is necessarily international, no single university can cover the broad expertises.

This has resulted in the programme offered by IRAP PhD in one of the youngest and most dynamic French universities, pole of research and teaching in the Euro-Mediterranean region (PRES): the University of Nice. It benefits from the presence of the astrophysics research institute of Observatoire de la Côte d'Azur involved in relativistic and non-photonic astrophysics as well as of the Center of ICRANet at Villa Ratti, where the coordination of the Doctorate will take place. The participation of the Freie Universität Berlin and of the Einstein Institute in Potsdam offers the possibility of teaching in relativistic field theories at the highest level. The University of Savoie offers the link to the particle physics at CERN. The activities at the University of Rome, at Stockholm University and at ICRA and ICRANet offer teaching programs in all the fields of relativistic astrophysics, including cosmology, the physics of gravitational collapse, gamma-ray bursts, and black hole physics. The University of Ferrara will be present with lectures and researches in the topics they have pioneered such as the development of space missions in X and gamma ray astrophysics and observational cosmology. Through ICRANet the extra-European connections with Brazil, China and India will be guaranteed: in China, with the Shanghai Observatory of the Chinese Academy of Science, studying the formation and evolution of large-scale structure and galaxies; in India, with the Indian Centre for Space Physics (ICSP), renowned for its research on compact objects as well as on solar physics and astrochemistry; in Brazil, with ICRA-BR at CBPF, where a successful program of research and teaching in relativistic astrophysics has been established in recent years.

Website: http://www.irap-phd.org

#### **Partners**

UNIVERSITE DE NICE - SOPHIA ANTIPOLIS, France (Co-ordinating institution)
SHANGHAI ASTRONOMICAL OBSERVATORY, China
FREE UNIVERSITY OF BERLIN, Germany
AEI - POTSDAM, Germany
TARTU OBSERVATORY, Estonia
STOCKHOLM UNIVERSTIY, Sweden
UNIVERSITY OF FERRARA, Italy
UNIVERSITY OF ROME - LA SAPIENZA, Italy
BRAZILIAN CENTRE FOR PHYSICS RESEARCH, Brazil
OBSERVATORY OF THE CÔTE D'AZUR, France
INDIAN CENTRE FOR SPACE PHYSICS, India
INTERNATIONAL CENTER FOR RELATIVISTIC ASTROPHYSICS NETWORK, Italy
UNIVERSITY OF SAVOIE, France

#### Contact:

Pascal Chardonnet LAPTH - Université de Savoie 9 Chemin de Bellevue BP 110 74941 Annecy-le-Vieux Cedex - France chardonnet@lapp.in2p3.fr

#### SETS

# Erasmus Mundus Joint Doctorate in Sustainable Energy Technologies and Strategies

**Duration:** Doctorate to be completed in 4 years

## Programme description:

In today's world, a compromise must be reached between energy and sustainability. In this context, the EU must implement an integrated policy with fully competitive internal energy markets. The challenge is to provide the same level of power while consuming less energy and reducing the dependence on fossil fuels. Rising to that challenge will call for a new generation of researchers and high-level professionals, trained in an international and multidisciplinary research environment and equipped with the knowledge tools and research skills required to lead the technological transition.

The Erasmus Mundus Joint Doctorate in Sustainable Energy Technologies and Strategies (EMJD/SETS) is a joint doctoral programme delivered by three institutions: Comillas Pontifical University at Madrid, Spain, renowned for excellence in electricity market regulation; Delft University of Technology at Delft, The Netherlands, known for the quality of its research and teaching in applied industry and network economics; and the KTH Royal Institute of Technology at Stockholm, Sweden, reputed for its expertise in electricity technologies. Three other prestigious universities also participate in the programme: Johns Hopkins University at Baltimore, USA, an international standard-setter in energy economics and sustainability; Paris Sud 11, at Paris, France, renowned for the depth of its knowledge of network industry economics and management; and the Florence School of Regulation at Florence, Italy, Europe's leading energy policy forum.

The doctorate is designed to be earned in four years. The first is devoted entirely to training (60 ECTS). Subsequently, students conduct research in at least two of the three universities awarding the joint degree. Further off-site research at any of the other consortium universities is encouraged, chosen in keeping with the subject addressed and student interest.

From the outset, students participate in a research group at their home university as part of their learning experience. The mobility built into the programme ensures that they also collaborate with research groups at other universities to benefit from a variety of perspectives (computer models or simulation, experimental research, academic studies and so on) and university cultures.

To qualify for enrolment, applicants must have a total of 300 ECTS credits, 60 of which attributable to a master's degree in engineering, and substantiate their command of the English language.

Website: http://www.iit.upcomillas.es/sets/

### Partners:

PONTIFICAL UNIVERSITY COMILLAS - MADRID, Spain (Co-ordinating institution)
KTH ROYAL INSTITUTE OF TECHNOLOGY, Sweden
JOHNS HOPKINS UNIVERSITY, WHITING SCHOOL OF ENGINEERING, United States
UNIVERSITY OF PARIS SOUTH, France
FLORENCE SCHOOL OF REGULATION, Italy
DELFT UNIVERSITY OF TECHNOLOGY, Netherlands

## Contact:

Ignacio Perez Arriaga ESCUELA TÉCNICA SUPERIOR DE INGENIERÍA ICAI c/Alberto Aguilera 23 28015 MADRID - Spain coordinador.doctorado@icai.upcomillas.es

# Education, Audiovisual & Culture Executive Agency Erasmus Mundus

Visit us:

Rue Colonel Bourg, 135-139 1140 Brussels Belgium

Write to us: Avenue du Bourget, 1 (BOUR 00/38) 1140 Brussels Belgium

Fax: +(32 2) 292 1328

e-mail: EACEA-Erasmus-Mundus@ec.europa.eu