MASTER'S PROGRAMME IN FIRE SAFETY TECHNOLOGY

- **2 years, 120 ECTS credits**
- **Erasmus Mundus joint programme**
- **Lund campus, Ghent University, The University of Edinburgh**
- **Number of places: approximately 30**
- **Application deadline – See www.imfse.ugent.be**
- **Programme start – See www.imfse.ugent.be**

PROGRAMME OVERVIEW

The International Master of Science in Fire Safety Engineering (IMFSE) is a two-year educational programme in the Erasmus Mundus framework. This master course is commonly organised by: Ghent University, Belgium (coordinator), Lund University, Sweden and the University of Edinburgh, UK

These three leading European research universities with complementary expertise in the field of Fire Safety Engineering join together with the main objective of creating an educational programme that defines the required knowledge for a professional fire safety engineer, capable of developing a Performance Based Design.

In targeting students beyond the EU, the IMFSE programme will enhance the profile and visibility of the European Union within the educational field of FSE and contribute to the competitiveness.

The IMFSE course consists of four semesters of 30 ECTS-credits each. The mobility structure, with possible change in study location after each semester, gives the students the opportunity to gain from the strengths and expertise of each of the three universities.

AFTER COMPLETING THIS PROGRAMME YOU WILL:

- Be able to critically evaluate and construct an original, performance based, fire safe design;
- Understand the complexity and evolution of the design tools and the many existing gaps of knowledge and limitations;
- Understand the current research trends and are able to subsequently perform scientific (PhD level) research in the domain of FSE;
- Gain an awareness of the professional context and the broad problems in FSE.
- Evaluate and make a motivated choice of different types of fire detection and suppression (passive and active) and develop a quantitative performance assessment;
- Identify structural weaknesses in fire and provide a quantitative assessment of performance;
- Make detailed risk analyses;
- Establish quantitative egress patterns in case of fire;
- Have knowledge on national and international (especially European) regulation.

PROGRAMME MODULES/COURSES

The classes in the first semester, covering basic topics in Fire Safety Engineering (FSE), can be attended in Ghent or Edinburgh. All students spend the second semester in Lund, where emphasis lies on enclosure fire dynamics, risk analysis and human behaviour. In the third semester, classes are again taught in Ghent (for general FSE) or Edinburgh (with focus on structural engineering in the context of FSE). The fourth semester is devoted to the Master's thesis, hosted by one or more of the three institutes.

Semester 1 (mobility track 1) Ghent University (G): Basics of Structural Engineering (9 ECTS), Introduction to Fire Dynamics (9 ECTS), Thermodynamics, Heat and Mass Transfer (6 ECTS) Language and Culture (6 ECTS).

Semester 1 (mobility track 2) University of Edinburgh (E): Structural Form, Function and Design Philosophy (6 ECTS), Finite Element Method and Implementation (9 ECTS), Fire science and Fire Dynamics (9 ECTS), Engineering Project Management (6 ECTS).

Semester 2 Lund University (L): Risk assessment (8 ECTS), Advanced Fire Dynamics (9 ECTS), Human behaviour in Fire (8 credits), Simulation of Fires in Enclosures (5 ECTS).

Semester 3 (mobility track 1) Ghent University (G): Explosions and Industrial Fire Safety (6 ECTS), Passive Fire Protection (6 ECTS): Active Fire Protection I: Detection and Suppression (6 ECTS), Active Fire Protection II: Smoke and Heat Control (6 ECTS), Fire Safety Regulation (3 ECTS), Performance-based Design (3 ECTS).

Semester 3 (mobility track 2) University of Edinburgh (E): Real Structural Behaviour (6 ECTS) OR Structural Dynamics and Earthquake Engineering (6 ECTS), Quantitative Methods in Fire safety engineering (6 ECTS), Current methods in fire safety engineering (6 ECTS), Fire Dynamics Laboratory (6 ECTS), Fire Resistance of Structures (6 ECTS).

Semester 4 Ghent, Lund or Edinburgh: Master thesis (30 ECTS).

ADMISSION REQUIREMENTS AND HOW TO APPLY

The minimum graduate admission requirements are:
1) A Bachelor's degree of Science in Engineering or recognised equivalent from an accredited university (minimum 3 years full-time study or 180 ECTS credits). Students in their last year of such a Bachelor's programme will however also be considered.
2) Sufficient English language ability.

Candidates for admission and/or a scholarship in IMFSE should apply online. Please see http://www.imfse.ugent.be for the application forms, deadlines and further details on the admission requirements.

Tuition fees

The tuition fee is 8000 Euro per year for non-EU/EEA students and 6000 Euro per year for EU/EEA-students. For details on tuition fees and scholarships, see http://www.imfse.ugent.be.

ABOUT ERASMUS MUNDUS

Erasmus Mundus is an EU-funded programme that aims to enhance quality in higher education through scholarships and academic cooperation between Europe and the rest of the world. Scholarships are awarded for certain top quality Master's programmes in Europe and the joint programmes are coordinated by a consortium of at least three universities. Studies are conducted in two or more universities. Students from all over the world can apply for the scholarships.

Lund University has six Master's programmes that have been approved for Erasmus Mundus scholarships.

ABOUT LUND UNIVERSITY

Founded in 1666, Lund University is today one of Europe's leading universities and is consistently ranked among the world's top 100 universities. Here, history and tradition lay the ground for the study and research environments of tomorrow. We offer education and research within engineering, science, law, social sciences, economics and management, medicine, humanities, theology, fine art, music and theatre. Through interaction with business and the community we ensure that knowledge and innovations benefit society. The University has 47 000 students and 6 300 staff from all over the world, based mainly in Lund, Malmö and Helsingborg. We work with 680 partner universities in more than 50 countries.

Education and Culture DG

CONTACT

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