

# Master in Entrepreneurship and Innovation

—  
Master professionnel  
2012 / 2013  
—



UNIVERSITÉ DU  
LUXEMBOURG





## Dear students,

New ideas, creative experimentation and breakthroughs emerge more easily in small yet open spaces, as Luxembourg and its University happen to be. By nourishing the most valuable asset of our society, our flexible and curious minds, the Master in Entrepreneurship and Innovation helps mold the leaders of Luxembourg's future economy and beyond; a daunting yet necessary challenge. Two priorities of the University are life sciences, (Bio), and security and trust (ICT), focus areas which from now on will be mirrored in the two new tracks offered this year.

I am fully convinced that this Master's degree offered by the University of Luxembourg will be successful not only because of the sterling academic background of our course leaders and teaching staff but also because of the trust and active involvement of our partner, the Luxembourg Chamber of Commerce. Do not miss this great opportunity to join the driving forces of this unique country, small in size but worldwide in horizons.

### **Professor Dr. Rolf Tarrach**

President of the University of Luxembourg

## Dear students,

The Master in Entrepreneurship and Innovation is the result of the partnership set up between the University of Luxembourg and the Chamber of Commerce of the Grand Duchy of Luxembourg through the Luxembourg Business Academy (LBA). The goal pursued is to build bridges between the academic world and business.

In today's global and increasingly competitive economy, innovation is a key driver of productivity. Entrepreneurs and managers need to understand the power of innovation and how it translates into new products, processes and services. The Master in Entrepreneurship and Innovation provides the tools necessary for the transition towards an efficient knowledge driven economy, which is a key objective of the European Union and Luxembourg.

The first five years of this Master's degree have been a great success which is a precious indication for future applicants, to whom I wish good luck.

### **Pierre Gramegna**

Director General of the Chamber of Commerce  
of the Grand Duchy of Luxembourg

# General structure

## The Master's Degree in Entrepreneurship and Innovation

We live in a time of change, in a fast-evolving, increasingly global and competitive economy. Sustaining a competitive advantage requires that individuals, companies, and nations anticipate, stimulate and manage change rather than simply react to it. This is what entrepreneurship is about: channelling change to your advantage. New ideas generate new realities and this requires knowledge from different disciplines and the ability to combine such insight with the daily practical realities of business life. The present pro-

gramme will teach you how to achieve this delicate balance by itself combining both theory and practice. To this end, the University of Luxembourg and the Chamber of Commerce have joined forces. With an internationally renowned faculty, a wide network of business connections both in Luxembourg and beyond and a clear focus on the country's economic priorities, the programme seals the gap between the academic and business worlds.

## A balanced learning degree

The programme is a one-year Master's degree. It is offered to students with backgrounds in traditional business disciplines as well as in the Humanities and Science (biology, physics, and engineering for instance). Diversity is viewed as an important element as it encourages students to think creatively and develop an entrepreneurial spirit. Experienced faculty from leading institutions worldwide will present and discuss the managerial implications of the latest academic research using a variety of methods: lectures, case studies (traditional and live/interactive/staged), group work and individual presentations.

Seasoned practitioners from entrepreneurial businesses will also bring students their know-how and practical views as well as discuss their problem-solving approaches. By efficiently blending classroom knowledge and practical know-how, we have created a balanced programme to the benefit of all involved.

## Schematic description of the program

Entrepreneurship and innovation are complex and often elusive notions. The programme is structured into 6 knowledge blocks that introduce the ideas and tools necessary to understand and apply entrepreneurship in practice. In addition, the programme offers students the possibility to follow a specialisation in Bio-Entrepreneurship or ICT Entrepreneurship (see the sixth block), two priorities on the national agenda of Luxembourg's economic development.

The first knowledge block will provide a stand-alone and multi-faceted overview of what entrepreneurship is, and equally importantly, what it is not. The relevance of entrepreneurship to start-ups or garage innovators is easy enough to grasp, but this will also be demonstrated for large-sized companies, governmental and international organisations and even non-profit, social initiatives. Theories of entrepreneurship will be introduced and entrepreneurial attitudes and skills will be carefully analysed. This block will result in a comprehensive examination of entrepreneurship across various economic and cultural environments.

The next three knowledge blocks deepen the insights provided by the first module. They consist of a technical entrepreneurship course as well as a marketing and finance one. These courses will be taught in an integrated manner practically achieved by the development of a business plan that runs across all three blocks. The purpose of unifying content in this manner is to underline the synergies between the 3 singular courses and see how they fit together in realising a common objective. The fifth block offers a toolbox for entrepreneurs. Quantitative methods and financial accounting are taught at the beginning of the programme. They are followed by a series of seminars on legal issues for entrepreneurs, and an intensive training on how to enter, conduct and exit negotiation.

The organisation of the sixth block depends on the track followed by the student. In the General Entrepreneurship track, the sixth block consists exclusively in the writing of a Master's thesis based on an internship project or an independent research project conducted by the student.

With the growing focus on biomedical research in Luxembourg the aim of the Bio-Entrepreneurship track, is to provide knowledge and tools of what it takes to establish successful biotechnology companies. Students will follow additional lectures and seminars, and engage in further individual and group work in order to understand the challenges in converting scientific discoveries

### **Internship and the student-mentor-faculty relation**

Over the year, students will spend an increasing amount of time working on their thesis project. We welcome applicants with a pre-existing link to or a project with a potential mentor organisation.

Matching students and companies relatively early on will permit that the thesis project can be clearly defined, with an adequate methodology and sound expectations

and innovations into successful companies and medical solutions for patients. This includes issues in terms of opportunity recognition, intellectual property development and strategy, team development, venture formation and growth and partnering strategies. This specialisation is followed by a reduced, Bio-Entrepreneurship focused research period on an internship-based or independent project. The ICT-Entrepreneurship track obeys the same logic. The focus is on secure, reliable and trustworthy ICT systems (networks and communication infrastructures) and services (both at the commercial and governmental levels). This includes technical aspects, issues of industry structure, human and regulatory elements, intellectual property development and strategy, and standardisation issues. The recent establishment of the Interdisciplinary Centre for Security, Reliability and Trust (SnT) in Luxembourg, with its ambition of making the country a European centre of excellence and innovation in ICT-related matters, renders the ICT-Entrepreneurship Track particularly significant. Again this specialisation is followed by a reduced, ICT-Entrepreneurship focused research period on an internship-based or independent project.

In all three tracks, the thesis aims at combining the academic knowledge possibly acquired within the mentor organisation. This block will be supported by methodology lectures, and embedded in a broader set of interactions between faculty, mentors, students and the business community.

as to possible results. By the time the actual full-time project work starts, the problem and objectives are established, and work can proceed efficiently. During the course of the project work, frequent group meetings between faculty, mentors and students will be organised as a platform to discuss and share experience and expertise.

## Facts for the academic years 2007-2011

### Students

Countries of origin

#### Year 1

Brazil, China, France, Germany, India, Italy, Luxembourg, Poland, Portugal, Romania, Russia, Senegal, Slovakia, Sweden

#### Year 2

Brazil, China, France, Iceland, India, Italy, Luxembourg, Mexico, Pakistan, Poland, Romania, Serbia, Sweden, Turkey, Ukraine, USA

#### Year 3

Albania, Bulgaria, China, Colombia, Czech Republic, Finland, France, Greece, India, Ireland, Latvia, Lithuania, Luxembourg, Mexico, Pakistan, The Philippines, Poland, Romania, Serbia, Sweden, USA

#### Year 4

Brazil, Bulgaria, Cameroon, China, Denmark, England, France, Greece, Italy, India, Iran, Luxembourg, Pakistan, Poland, Russia, Spain, USA

#### Year 5

Angola, Bangladesh, Brazil, Bulgaria, China, Czech Republic, Denmark, Cameroon, Estonia, France, Greece, Hungaria, India, Italy, Japan, Mexico, Nigeria, Pakistan, Peru, Poland, Russia, Ukraine, Venezuela, Vietnam

### Background

Business administration, Biotechnology, Law, Philosophy, Hospitality management, Naval engineering, Communication, Literature, Economics, Digital Media, Environmental engineering, Medical school, Philology, Linguistics, International Relations, Architecture, Marketing, Electronics ...

### Age

22 to 44

### Companies

Arcelor Mittal, BGL, Bofferding, Cargolux, Cash-and-Go, Chambre de Commerce, CIGDL, CRP-Tudor, Deloitte, Dexia, Dexia-BIL, EIB, European Investment Fund, EPC, Epuramat, Ernst & Young, Events & More, Goeres Group, IBBL, IEE, Imatec, IUEOA, Jamendo, Luxinnovation, MACH Mangrove, Millicom, Paul Wurth, PriceWaterhouseCoopers, RBC Nokia Siemens, Santec, Schwartz & Co. UBS, VITIS Life, Viva International, Vodafone, Volvo Construction Equipment ...

# Detailed programme structure

## **Block B1** Entrepreneurship (6 ECTS)

- Entrepreneurship in the new, global economy
- Enterprise culture and values
- Theories of entrepreneurship: myths and schools of thought
- Creativity and opportunity identification
- Four entrepreneurial environments
- Entrepreneurial management and intrapreneurship
- Strategic entrepreneurship and leadership
- Business planning: purpose, structure, content and presentation
  - › Starting a new business
  - › Growth, learning and dynamic capabilities of small firms

## **Block B2** Managing Innovation (6 ECTS)

- The dynamics of innovation
- Organising innovation in the firm
- Organising innovation outside the firm
- Organising innovation in communities and user innovation
- Managing convergence in innovation
- Innovation and sustainability

## **Block B3** Marketing (6 ECTS)

- Market segments and international marketing programmes
- The growing importance of brand names
- Cultural differences in marketing and how to handle them
- International strategies when establishing businesses in different countries

## Block B4

Finance  
(6 ECTS)

- Risk, return and valuation principles
- Typology and forecasting of revenues and expenses
- Integrated business plan
- Capital budgeting: risk and cost of capital
- Debt: limits and valuation of debt financed investments
- Real options
- Venture capital industry and investment process
- Structuring venture capital deals
- Exit strategies
- Business valuation and harvesting decisions

## Block B5

Tools  
(6 ECTS)

- Quantitative methods
- Financial accounting
- Negotiation techniques
- Legal issues: Presentation Skills, CV Development

## Block B6

Practical project work and  
the Master's thesis  
(30 ECTS)

The objective of this block is to enable joint learning and the exchange of experience and knowledge between mentor organisations, students and faculty. The output of this block will be a Master's thesis based on an internship project or an independent and original research project conducted by the student. Depending on the track chosen by the student, time is either fully devoted to project work (General Entrepreneurship track) or split between the acquisition of technology/ industry knowledge and project work (Bio- and ICT-Entrepreneurship tracks). The Bio-Entrepreneurship track is supported by the Luxembourg Centre for Systems Biomedicine (LCSB) whereas the ICT-Entrepreneurship track is supported by the Interdisciplinary Centre for Security, Reliability and Trust (SnT), both centres being part of the University of Luxembourg.

During an internship, students will apply models and concepts taught at the University to a specific challenge faced by the mentor company. Students will be called

upon to address and help implement solutions within their companies, and this project in turn will provide most of the material for their Master's thesis. Some students can opt for their personal, independent research project, analysing the opportunities and economic value of a business model of their own.

Throughout this process, faculty members will continue to provide personal attention and guidance to the students, and to animate the relation between students and mentor companies through seminars and experience sharing meetings.

The objective sought is to establish a climate conducive to knowledge exchange and learning. All parties involved will benefit by linking the professional and academic worlds in such a way.

## Time organisation and workload

All three tracks of the Master's programme (60 ECTS) include approximately 300 classroom hours (30 ECTS) over the first semester. In the General Entrepreneurship track, the second semester is dedicated to the preparation and defence of a Master's thesis (30 ECTS) based on an internship project or an independent and original research project conducted by the student. The Bio- and ICT-Entrepreneurship tracks of the programme involve technology/industry-specific classes and work during the first part of the second semester (10 ECTS) and then a shorter Bio- or ICT-Entrepreneurship-focused research period on an internship-based or independent project (20 ECTS). During the second semester, students of all three tracks gather for methodology seminars and experience-sharing meetings, as well as occasional evening seminars.

The programme is organised over 10 months, from September 24, 2012 to July 12, 2013. From September 24, 2012 to February 15, 2013, all students follow the same courses (including the Christmas and Winter breaks).

The General Entrepreneurship track focuses on project work and thesis writing from February 18, 2013 to the final defence day on July 12, 2013.

In the Bio- and ICT-Entrepreneurship tracks, students will follow additional lectures and seminars, and engage in further individual and group work over five weeks in the period from February 18, 2013 to March 22, 2013. At the end of this period, exams will also be organised.

## Target group and admission criteria

Applicants should hold a Master's degree or the first year of a Master's degree (240 ECTS) in traditional business disciplines. Students holding Humanities or Science degrees (biology, physics and engineering, for instance) are also invited to apply. Candidates holding a Bachelor's degree (180 ECTS) and a substantial amount of professional experience (at least 3 years) are also welcome.

Admission is conditional to the examination of the applicant's academic record. The number of students selected will be limited to approximately 30. English is the teaching language, thus an excellent command of it is required.

## Calendar, fees and fellowships

The programme starts on Monday, September 24, 2012. The integration seminar is organised on the weekend of September 29 and 30. The fees for the programme amount to 3,000 EUR. The programme offers a few merit-based fellowships. Beside financial need and merit, criteria for fellowship selection can also include personal

background and skills, academic and extracurricular achievement, leadership, community involvement and integrity. Applications are reviewed by the Fellowship Committee to identify and select the best recipients.

# Contact

Master in Entrepreneurship and Innovation / Luxembourg Business Academy  
2b, rue Albert Borschette / L-1246 Luxembourg

## **Prof. Denise Fletcher**

Course Director

denise.fletcher@uni.lu



## **Benjamin Ledran**

Programme Manager

MasterEI@uni.lu

T. +352 / 46 66 44-6838





Université du Luxembourg  
148, avenue de la Faïencerie  
L-1511 Luxembourg

[www.uni.lu](http://www.uni.lu)

**Online registration deadline**

Non-EU students : February 15, 2012

(all documents must be received by the Student Department "SEVE" by February 22, 2012)

EU students: May 15, 2012

(all documents must be received by the Student Department "SEVE" by May 22, 2012)

---

To apply go to

[www.uni.lu/etudiants/inscriptions\\_reinscriptions](http://www.uni.lu/etudiants/inscriptions_reinscriptions)