

Master Programme in Innovation and Technological Entrepreneurship

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Value Proposition

Integrated training in the innovation process and in technology, promoting the creation of new technology-based businesses. Our students go through a rigorous hands-on training that covers the entire venture creation process.

Short description

In a group setting, the exposure to different thinking styles and people promotes what is called creative abrasion, which, if properly managed, can greatly enhance the innovation potential. This is the philosophy behind MIETE, which was conceived to promote innovation and entrepreneurship with multidisciplinary teams. With this in mind, MIETE aims at adapting itself to the profiles of candidates from different

areas including, amongst others, Management, Engineering, Biotechnology, Sciences and Design. Throughout the programme, the teams develop key integrated competencies on innovation, entrepreneurship and technology that will ultimately enable the students to create and develop new technology-based businesses.

People who should follow this programme: anyone with a strong will to creating new businesses.

People attending MIETE are usually middle managers from the private sector, faculty staff and researchers or recent graduate students wishing to major on innovation and entrepreneurship. Students applying to MIETE should have completed their 1st cycle – cf. Bolonha.

U.PORTO Course Plan for 2015/2017 2nd Cycle - Bolonha

6 Years Accreditation
A3ES MAR2020

1st YEAR		2nd YEAR	
1st Semester	2nd Semester	3rd Semester	4th Semester
Elective 6 ECTS UP Elective or • Design Thinking (3ECTS) • International Negotiation (3ECTS)	Elective 6 ECTS UP Elective or • Operations Strategy (6 ECTS)	3 New Elective MIETE Courses	
Introduction to Entrepreneurship 6 ECTS Product and Services Development Management 6 ECTS Marketing Management 6 ECTS Introduction to accounting and financial management 3 ECTS Technology Commercialization 3 ECTS	Project for Opportunity identification and Evaluation 6 ECTS Innovation Management 6 ECTS Startup's Strategy 6 ECTS Quantitative Methods 3 ECTS Marketing Research 3 ECTS		
		Business Construction Project 9 ECTS Business Law 3 ECTS Finance and Capital Budgeting 6 ECTS Research Methods and beginning of the preparation of the Dissertation / Project /Internship 12 ECTS	Dissertation / Project /Internship 30 ECTS

AREAS

- Product design
- Innovation Mgt.
- Management
- Marketing
- Marketing Research
- Law
- Research Methods

Learning Outcomes

Design Thinking (MIETE Elective – New 2020): On completion of this course, students shall know to identify the principal characteristics of Design Thinking, and differentiate the various process models and tools, by developing a creative and critical attitude about the applied tools.

International Negotiation (MIETE Elective – New 2020): At the end of this course, students should be aware of the complexity of situations - in multicultural environments - arising from the different social, ethical, cultural and economic contexts with which in professional life they will confront, and for that, and for that, they have: to Know-how to know (the decision-making process, cultural models, and the win-win trading methods); to Know-how to be (Interpreting their behaviour, based on ethical and cultural values); to Know-how to do (Identify the decision-making processes, in particular the non-ethical ones, and develop mitigation of those impacts; to Identify cultural aspects and develop mitigation of their impact; to Develop the strategy, planning, preparation and participation in a win-win negotiation in a multicultural environment.

Operations Strategy (MIETE Elective – New 2020): Learning outcomes of the curricular unit: a) To understand the role played and the impact of an operations strategy in corporate competitiveness and objectives b) To understand and explain the different operations strategy frameworks; c) To review the most used strategies to improve operations performance: resources, processes and capabilities dimensions; d) Design and operations strategy aligned with the business strategy.

Introduction to Entrepreneurship (Elective – New 2020): Understanding and analysing the entrepreneurial process and the entrepreneurs' way of thinking, reasoning and acting. Applying different methods for generating Innovative products and services (user-driven and technology push); Being able to effectively interact with the Inventor and/or Research Team.

Product and Services Development Management: Create confidence in your own ability to create a new product/service; Raise awareness of the role of the customer and multiple functions/stakeholders in creating a new product; Develop the ability to coordinate multiple, interdisciplinary tasks, in order to achieve a common objective; Enhance team working skills; Learn how to manage a product development project.

ELECTIVES (*): MIETE electives are recommended. However, MIETE students may attend other lective courses from a 2nd Cycle at U.Porto. Students with no technological background will have to choose courses from technology areas.

Marketing Management: Demonstrate the ability to thoroughly and creatively analyse information using marketing frameworks to make decisive recommendations for action in a given marketing situation. Accurately identify marketing problems, create strategic solutions, and recommend effective tactical plans that demonstrate knowledge of integrated marketing concepts. Show awareness and sensitivity for the global nature of marketing and markets, by considering diverse points of view, and adapting to unique market requirements.

Technology Commercialization: The focus of this course is high technology, particularly radical innovation. Many organizations possess technology and intelligence that is not used or is used only for captive applications. An effective method of technology transfer can produce: Technological products in the form of licenses or rights to use, which can be sold repeatedly with a relatively low cost of goods sold resulting in a continual stream of income. Technological products that are one of the few articles of commerce for which governments provide and sanction monopoly rights for an extended period of time.

Introduction to accounting and financial management: Equip students with a set of skills that allows them elaborate and interpret the different financial statements that are produced by the accounting, basis of all economic and financial analysis, and are part of decision-making process. Acquaint students with financial analysis techniques that enable company diagnosis based on financial information

Project for Opportunity identification and Evaluation: Generate product or service concepts that have the potential for addressing the market. Recognizing an opportunity for technology valorization. Executing a Feasibility Study (Description of the Project, Market Feasibility, 1st approach to Technical Feasibility).

Innovation Management: Assess and interpret innovation processes; Develop and formulate managerial strategies to shape innovative performance; Utilise tools of innovation management to map and measure innovative activities; Diagnose different innovation challenges and make recommendations for resolving them.

Learning Outcomes

Startup's Strategy: To endow students with fundamental concepts of entrepreneurial Strategy development for the commercialization of a technology-based product/service. To develop and extend the knowledge (i) on Business Models (BM) and on the relevance of its implementation in the specific reality of each business.(ii) on the reality of setting-up a Startup, understanding the major differences with an established company. To endow students with the use of previously acquired concepts on financial evaluation of investment projects and on funding a new technology based venture. To endow students with the capability of: a) Creating and implementing a complete, concise and well founded (i) strategic plan and (ii) BM compatible with the strategy, both adequate for a technology based venture. b) Having an holistic and integrated vision of a business venture, involving all its resources and stakeholders; c) Assuming and executing the setting up of a startup based on a Business Plan with adequate financial structure

Quantitative Methods: Inference and statistical significance (Estimating confidence intervals, Parametric tests and Non-parametric tests); Multivariate analysis and causality (Multiple linear regression, Binary logistic regression); Multivariate analysis of latent structures (Cluster analysis and Principal components and factor analysis) Scale analysis: reliability and composition of scales

Marketing Research: Define and study research questions; Plan the marketing research steps; Comprehend and identify the

various data sources; Understand and compare different qualitative and quantitative techniques for data collection; Design a questionnaire; Analyse the data.

Business Construction Project: Executing a Feasibility Study. Producing a Business Plan supported by all adequate primary and secondary sources of information. Producing a business pitch presentation.

Business Law: The course objective is to enable the knowledge of the key financial and legal aspects to be taken in consideration when developing and implementing a business plan adjusted to the reality of a new company.

Finance and Capital Budgeting: This course seeks to equip students with a set of skills that allows them elaborate a business plan, project a firm financial statements and interpret the valuation criteria.

Research Methods and beginning of the preparation of the Dissertation / Work Project /Internship: At the end of the course, the student should be able to: understand some basic concepts of research and its methodologies; identify appropriate research topics and a research problem; prepare a project dissertation proposal. At the final essay, the student is expected to: clearly identify the research question(s) and discuss the gap/opening question he wants to study in its master dissertation; fully perform a literature review and systematize the relevant literature in a main framework; justifiably identify the methodology suitable to analyze the problem in research (based in the relevant literature); plan the research work through a chronogram.

Example of Good Practice



The report produced for the European Commission “Entrepreneurship in higher education, especially within non-business studies – Final Report of the Expert Group ”, features MIETE (page 51) in it’s Chapter 5 (“SOME EXAMPLES OF GOOD PRACTICE”) under the topic: “Building integrated competencies on innovation, entrepreneurship and technology, enabling students to create and develop new technology-based businesses, and ultimately bridging the gap between technology discovery and the commercialisation of innovative products and services.”