

From Science to Business

BARCELONA



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1.1 OVERVIEW

Today's global economy and business are facing a tremendous challenge: how to transform research, the money invested and the resources provided to laboratories and scientific parks into new innovations to create new products and services that can lead to the improvement of the life of individuals and society as a whole.

One of the main barriers encountered is the “distance” between researchers and the business world. This distance is not usually physical, it is simply a lack of knowledge on both sides.

Minimizing this distance would, without a doubt, **improve the returns to society** on the money invested in R&D.

The participation of the scientist behind the invention and/or the researchers who decide to pursue a professional career in developing new businesses will significantly increase the odds of a successful new company.



1.2 PARTICIPANTS

This programme is aimed at researchers, senior researchers, postdoctoral fellows and last year doctoral students as well.

It is also addressed to managers in charge of research labs, scientific parks, innovation or R&D departments, and for decision makers in regional policy.

This course aims to **increase the speed of turning innovation and knowledge into new ventures**. The course is designed for groups of approximately 20-30 people to ensure optimal participation, learning and faculty-to-participant ratio.

1.3 LEARNING OBJECTIVES

The **From Science to Business** programme will prepare participants:

- To **get acquainted with the business world**, and to show how companies create value to society and for themselves: providing more, better and healthier food, a cleaner, healthier and more safety environment, a longer and better quality of life, wealth, etc.
- To provide with a framework to understand **how companies work** and **how they create value** in a competitive environment.
- To **help to understand the new venture creation process**, and the role that science/technology plays in it.
- To show that **new venture creation needs scientists and engineers**, and that entrepreneurship can be an attractive career path for them.

1.4 KEY TAKEAWAYS

How to find and evaluate business ideas.

- Tools to analyze the environment, the industry and the market to understand the idea.
- Methods to differentiate between an idea and an opportunity.
- How to craft and validate a suitable business model.
- Basics of competitive strategy, and how to get your clients to continuously choose you instead of your competitors.
- Basic understanding of the interrelationship between science/technology and strategy.
- Understanding financial statements: profit and loss account, cash flow and balance sheet.
- Methods to estimate the capital requirements of the venture: the financial plan.
- Hands on working on a business opportunity and design a business model for it.

2. CONTENTS & STRUCTURE

Entrepreneurs Panel	Innovation & Strategy	Entrepreneurship	Entrepreneurial Finance	Project Workshop
<ul style="list-style-type: none"> • Warm up for the programme • Learn about experiences from other entrepreneurs & open participants' horizons • Network with other participants 	<ul style="list-style-type: none"> • Provide a framework to understand the company from a strategic point of view • Provide tools to analyze the general environment • Understanding the role of innovation in framing strategy 	<ul style="list-style-type: none"> • Understand the process of developing and managing a scientific new venture • Learning and practicing how to design and validate a business model for a new science business • Learning how to prepare and use a business plan 	<ul style="list-style-type: none"> • Understand the financial needs of a venture • Learn how to develop a Financial Plan, estimate cash flows and determine the financial needs • Get to know the financial resources for a science-based new venture 	<ul style="list-style-type: none"> • Put into practice the knowledge acquired during the other sessions. • Recognize the management learnings as their own. • Design a science/technology-based start-up using collaborative methodology

	Mon May 27	Tue May 28	Wed May 29	Thurs May 30	Fri June 01
AM	Welcome event & Panel of Entrepreneurs (organised by BIST)	Innovation & Strategy (5 h)	Entrepreneurship (2 h)	Project Workshop (time for participants to work on their projects)	
			Project workshop (3 h)		
<i>Lunch</i>					
PM		Entrepreneurship (3h)	Entrepreneurial Finance (3 h)		

	Mon June 03	Tue June 04
AM	Project Workshop (time for participants to work on their projects)	Entrepreneurial Finance (5 h)
		<i>Lunch</i>
PM		Project Workshop (3h)



2. CONTENTS & STRUCTURE

Welcome Event & Panel of Entrepreneurs

This activity will serve as the programme kick off. BIST will invite some entrepreneurs who, because of their stories, projects or start-ups as a whole, may be meaningful for the participants.

The purpose of this activity is to gather in an informal manner so that participants get to know each other and meet their teams, while they get inspired by entrepreneurs with scientific/technological backgrounds.

2. CONTENTS & STRUCTURE

Innovation & Strategy

This module will provide a framework for understanding the company from a strategic point of view, the tools to analyze the general environment and the industry and a model for strategic management.

Module contents:

- Different business strategy options and the search for a competitive advantage.
- The Industry and the Company Value Chains.
- Key Success Factors.
- Mechanisms for growth.
- Science/technology and strategy interrelationship.

Faculty to be involved



[Prof. Dr. Xavier Ferràs](#)

2. CONTENTS & STRUCTURE

Entrepreneurship

This module will focus on two main issues in Entrepreneurship – firstly, the context, in which a scientific venture is established and operates and, secondly, the process of developing and managing a new venture.

Module contents:

- Understanding the process of building a science-based new venture.
- From ‘the idea’ to ‘the opportunity’: assessing the opportunity.
- Designing a suitable business model for the opportunity.
- The business plan: how to prepare and use it.

Faculty to be involved



[Prof. Dr. Jordi Vinaixa](#)

2. CONTENTS & STRUCTURE

Entrepreneurial Finance

This module will be dedicated to one of the most challenging and difficult activities that an entrepreneur must embark upon: understanding the financial needs of the venture.

Module contents:

- Understanding the financial statements: profit and loss account, cash flow and balance sheet.
- Methods to estimate the capital requirements of the venture.
- Preparation of the Financial Plan.
- Financial resources for an innovative new venture: business angels and venture capital.

Potential Faculty to be involved



[Prof. Teresa Corrales](#)

2. CONTENTS & STRUCTURE

Project Workshop

A Project Workshop will be put in practice throughout the programme so that participants will implement their learnings and they will apply such learnings to their own cases/centers from an eminently practical approach.

Layout of the Workshop:

- Participants will work in teams of 4-5 people
- During the Workshop teams will:
 - ✓ decide on the business to work on
 - ✓ work on the business opportunity: Market size, competitive analysis, and time (technology adoption Life Cycle)
 - ✓ design a business model (BMC) for the opportunity
 - ✓ identify the (3) most important unknowns/hypotheses on the BM and will work on a validation strategy
 - ✓ estimate the time and the amount of money they would need for the get to the next step (first validation round)
 - ✓ pitch their projects to receive feedback from the other participants pairs and professors
- Teams will pitch their projects to all the participants, professors, and representatives of BIST Centers to obtain feedback

2. CONTENTS & STRUCTURE

Project Workshop

Module contents:

- Applying the contents acquired during the other sessions of the programme
- Fostering communication skills and collaboration between other scientists/technologists.
- Understanding the key issues when implementing a business idea
- Pitching a project

Potential Faculty to be involved



[Prof. Dr. Jordi Vinaixa](#)

2. CONTENTS & STRUCTURE

Cases

Throughout the programme cases related to technology and biotech businesses and start ups will be of preference.

ESADE will work with science based entrepreneurs in order to explore the possibilities to incorporate some parts of their experiences into the course. This will allow the students to see examples of entrepreneurship specifically related to science.



3. FACULTY TO BE INVOLVED



Prof. Dr. Jordi Vinaixa
Programme Director

Associate Professor, Department of Strategy and General management.
PhD in Chemistry (University of Barcelona) and MBA (ESADE).

His main subjects of interest are Innovation and Technology based
Entrepreneurship.

He did research in chemistry at the Universities of Barcelona and of
Sussex, and has previous professional experience as a manager in the
chemical, education, cultural and service industries.

Academic Director of the ESADE courses for the KIC InnoEnergy.
Running *From Science to Business* and other science and technological
related courses and activities since 2005.

3. FACULTY TO BE INVOLVED



Prof. Dr. Xavier Ferràs

PhD in Economics and Business from UB and MBA from ESADE and Telecommunications Engineer from UPC.

Executive Director, ESADE Custom Programmes.

Former Dean of the Faculty of Business and Communication at the University of Vic.

Until 2012, he was Director of the ACC10 Centre for Business Innovation (Catalan Agency for Competitiveness), and was responsible for technology transfer policies, R&D and development of clusters in Catalonia.

3. FACULTY TO BE INVOLVED

Prof. Teresa Corrales



Associate professor of finance at ESADE Business School. She is the academic director of the ESADE's Executive Programs AMP (Advanced Management Program) and of the ESADE – AALTO MBA for Executives Program. Her professional career has been developed in the financial area. She started her career at Price Waterhouse & Coopers in the audit division, being involved in several industries as automotive, gas, distribution, press, among others. Afterwards she held manager roles in the financial area in listed Spanish companies, involved in the real estate business. Currently, she combines teaching and working as a financial consultant mainly involved in the management of insolvency processes, valuation of companies, and consultancy projects. Teresa holds a Bsc in Management and MBA from ESADE. Her main subjects of interest are Entrepreneurship and Valuation of companies.

4. ABOUT ESADE

- *From Science to Business* programme delivered at ESADE since 2008 for ICFO
- Since 2010 course delivered for the KIC InnoEnergy in collaboration with the European Institute of Innovation & Technology (EIT)
- International teams of Msc and/or PhD students
- 15 editions
- More than 375 participants from 20 nationalities





4. ABOUT ESADE

International PRESTIGE

ESADE is one of the top-10 business schools in Europe according to the main international rankings.

RECOGNIZED by Companies

ESADE the 1st (most highly valued) international business school by companies.

INNOVATIVE with Regards to Learning

ESADE's learning model, based on the development of managerial skills and competencies, is a pioneer in Europe.

COMMITTED to Society

ESADE is the second most highly ranked business school in the world for the corporate social approach and ethics of its MBA. Its Institute for Social Innovation is the cornerstone of our social commitment.



Creates LINKS with People

ESADE is the business school with the second largest alumni association in Europe (with more than 40,000 alumni).

HIGH QUALITY, Relevant Learning

ESADE's commitment is to provide high quality, relevant learning for companies that translates into results.

Top-Nontech FACULTY with Business Experience

ESADE has a widely recognized faculty, that on top of developing high-quality research, has also relevant business experience

4. ABOUT ESADE

- ESADE and CERN are collaborating in **ATTRACT**, a new, open, pan-EU initiative to accelerate the development of detector and imaging technologies for market – through a process of co-innovation with other labs, SMEs, industry and universities.
The aim: to work with scientists, students, entrepreneurs and investors to invent new services and products, and attract new investment to the sector.
A project is already in going on at CERN’s Geneva campus, in collaboration with ESADE and Aalto.
- ESADE and CERN are also developing the [Thinking the Unknown program](#), for executive profiles.



[Financial Times Article on
ESADE's educational activities
with CERN](#)



6. CONTACT PEOPLE FOR THIS PROJECT

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