



Barcelona Institute of  
Science and Technology

esade

# From Science to Business

## FS2B 2023

9-20 October, 2023

@ ESADE Business School in Barcelona



**From Science to Business (FS2B)** is a course designed by The Barcelona Institute of Science and Technology and Esade to improve **entrepreneurship and innovation skills** among the members of the BIST community, with the goal of **fostering the development of new ventures and the creation of spin-off companies**.

Researchers from other institutions are also welcome upon request and subject to availability.





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# 1. About FS2B

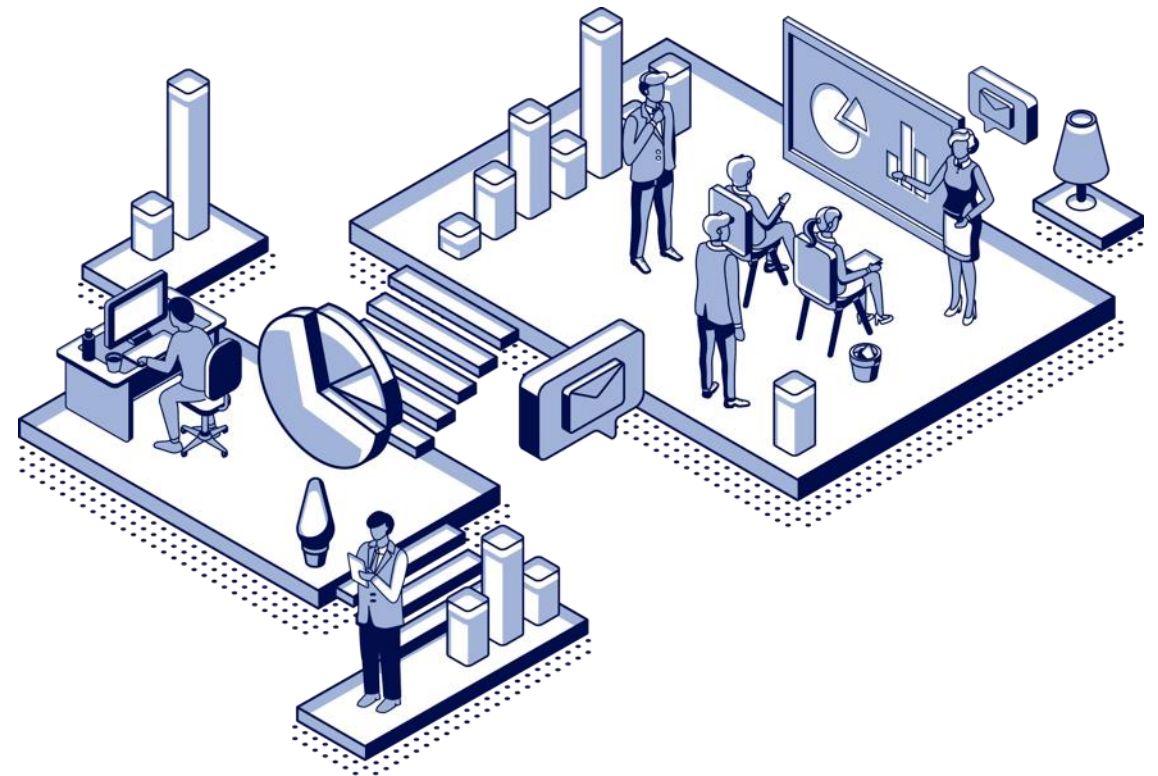
# Overview

Today's global economy and businesses are facing a tremendous challenge: how to transform research -the money invested and the resources provided to research institutions- into new innovations to create new products and services that can improve 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.

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



# Participants

This programme, delivered by Esade since 2008 (firstly in collaboration with ICFO and, from 2016, with BIST), is aimed at Senior and postdoctoral researchers, staff and graduating doctoral students.

This course aims to **increase the speed of turning innovation and knowledge into new ventures.**

The course, is designed for groups of approximately 30-35 people to ensure optimal participation, learning and faculty-to-participant ratio.



# 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 for society and for themselves: providing more, better and healthier food, a cleaner and safer environment, a higher quality of life, etc.
- To provide a framework to understand **how companies work** and **how they create value** in a competitive environment.
- To **help 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.

# Key takeaways

## How to find and evaluate business ideas.

- Methods to differentiate between an idea and an opportunity.
- Tools to analyze the environment, the industry and the market to understand the opportunity.
- How to craft and validate a suitable business model.
- The basics of competitive strategy: how to win clients and differentiate yourself from your competitor
- 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 experience: working on a business opportunity and design a business model for it.





# 2. Contents & Structure

# Contents & Structure

## Entrepreneurs Panel

- Warm up for the programme
- Learn from and interact with science and technology entrepreneurs & open participants' horizons
- Get to know the other participants

## Entrepreneurship

- 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

## Innovation & Strategy

- 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

## Entrepreneurial Finance

- 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

## Project Workshop

- Put into practice the knowledge acquired during the sessions.
- Apply the management learnings in your own project.
- Design a science/technology-based start-up using a collaborative methodology



# SCHEDULE FS2B 2023

Mon, 9 Oct Location: Esade	Tues, 10 Oct Location: Esade	Wed, 11 Oct Location: Esade	12 to 19 Oct	Thurs, 19 Oct Location: Esade	Fri, 20 Oct Location: Esade
	9:00–11:00 Entrepreneurship Prof. Jordi Vinaixa	9:00–11:00 Innovation & Strategy Prof. Xavier Ferràs	Time for groups to work on projects	9:00 –11:00 Entrepreneurial Finance Prof. Teresa Corrales	9:00 –10:30 Project Workshop (in groups)  Coffee break in classroom
	Coffee break			Coffee break	
	11:30–14:00 Entrepreneurship Prof. Jordi Vinaixa	11:30 –14:00 Innovation & Strategy Prof. Xavier Ferràs		11:30 –14:00 Entrepreneurial Finance Prof. Teresa Corrales	10:30 –13:30 Project Workshop & Final Pitch (with Esade faculty)
	Lunch			Lunch	
	15:00 –16:30 Project Workshop (in groups)	15:00 –16:30 Project Workshop (with Esade faculty)		15:00 –16:30 Entrepreneurial Finance Prof. Teresa Corrales	<b>ALL COURSES WILL BE TAKING PLACE AT ESADE</b>
	Coffee break			Coffee break	
15:30 –18:30 Welcome Event: Entrepreneurs Roundtable & Network Reception	16:45 –18:00 Project Workshop (in groups)	16:45 –18:00 Project Workshop (with Esade faculty)	16:45 –18:00 Entrepreneurial Finance Prof. Teresa Corrales		
				Project Workshop (in groups)	

**ESADE Location:**  
Av. d'Esplugues, 92-96  
08034 Barcelona

# Welcome Event & Panel of Entrepreneurs

- This activity will serve as the **programme kick-off**. BIST will invite a selected number of entrepreneurs who will share their stories, their experiences and their vision on start-up creation with the participants.
- The purpose of this activity is to get **inspired by entrepreneurs with science and technology backgrounds**. We will facilitate the interaction with both, the speakers and the other participants.



# 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](#)

# 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](#)

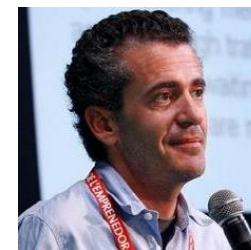
# Project Workshop

- A Project Workshop will be put into practice throughout the programme so that participants will implement their learnings and will apply them to their own case studies and projects with an eminently **practical approach**.
- **Layout of the Workshop:**
  - Participants will work in teams of approximately 5 people, thus developing communication and collaboration skills between peer scientists/technologists
  - During the Workshop teams will:
    - 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 most important unknowns/hypotheses on the BM and work on a validation strategy
    - estimate the time and the amount of money they would need to get to the next step (first validation round)
    - pitch their projects to receive feedback from the other participants peers and professors
  - Teams will pitch their projects to all the participants, professors, and representatives of the Centers to obtain feed-back

## FACULTY TO BE INVOLVED



[Prof. Dr. Jordi Vinaixa](#)



[Prof. Dr. Lluís Pareras](#)

# 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.

## FACULTY TO BE INVOLVED



Prof. Teresa Corrales



# Cases

- Throughout the programme, technology and science-related businesses and start-ups will be discussed.
- ESADE will work with science-based entrepreneurs in order to explore the possibility to incorporate parts of their experiences into the course. This will allow the students to see examples of entrepreneurship specifically related to science.





# 3. Faculty

# Faculty



## 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.

# Faculty to be involved



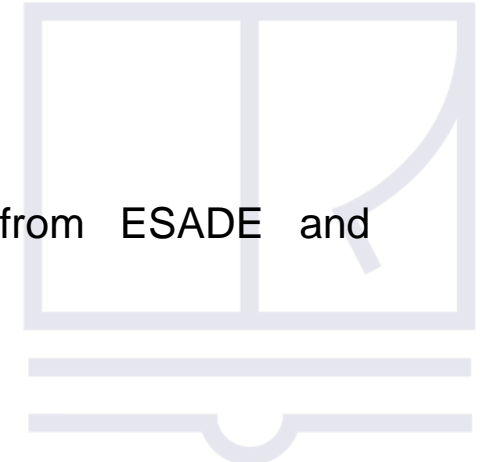
## Prof. Dr. Xavier Ferràs

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

Associate Dean, ESADE ExecMBA Programs

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.



# Faculty to be involved



## Prof. Teresa Corrales

Lecturer associate professor of finance at ESADE Business School.

Bsc in Management and MBA from ESADE. Her main subjects of interest are Entrepreneurship and Valuation of companies.

She started her career at Price Waterhouse & Coopers in the audit division, being involved in several industries as automotive, gaz, distribution, press, etc....and afterwards she held manager roles in the financial area in listed Spanish companies, involved in the real estate business.

At present, she combines teaching and working as a financial consultant mainly involved in the management of insolvency processes, valuation of companies, and consultancy projects. She is also Independent Director in the Board of Directors of a financial company.

# Faculty to be involved



## Prof. Dr. Lluís Pareras

Founding partner at Invivo Ventures FCR, a venture capital fund investing in life sciences and healthcare (€40M, first closing). Degree and PhD in Medicine, specialist in Neurosurgery, and Global Executive MBA (IESE). He founded the “Innovation and entrepreneurship program” at the Barcelona Medical Association (CoMB), where he has been coaching entrepreneurs and he has founded and directed the Healthcare Investment Forums since 2009.

He has been an entrepreneur himself in the healthcare space and raised capital from investors. Deeply involved in the innovation ecosystem, he is a member and advisor of many healthcare innovation organizations such as Biocat (Board of Trustees), CIMTI, BarcelonaActiva Mentoring Program, Generalitat de Catalunya-CASOST and HEALTHIO among others. Author of numerous books in the field of innovation, venture capital and healthcare, such as “Innovation and Entrepreneurship in Healthcare”, published internationally. In the academic space, he has been a teacher in several business schools about healthcare innovation and venture capital. He remains as the Director of Healtiquity, SCR, a venture capital fund focused in early-stage companies in the healthcare sector, where he led the investment strategy and transaction processes of the different portfolio companies. Member of the Board of Directors of different life-sciences companies including Healtiquity's investments: Versantis, n-life Therapeutics and Minoryx Therapeutics. (TWITTER: @pareras)



# 4. About Esade



# About Esade



- Esade has delivered the course *From Science to Business* to BIST staff since 2008, initially collaborating with ICFO and from 2016 with the Barcelona Institute of Science and Technology.
- Since 2010 Esade also delivers the course for the KIC InnoEnergy in collaboration with the European Institute of Innovation & Technology (EIT) - International teams of MSc and PhD students - 15 editions - More than 375 participants from 20 nationalities.





# 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.

# About Esade

- Esade and CERN are collaborating in ATTRACT (<http://www.attract-eu.org/>), 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 programme](#), for executive profiles.



[Financial Times Article on Esade’s educational activities with CERN](#)



# 5. About BIST

# The Barcelona Institute of Science and Technology

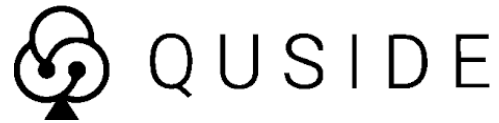
BIST is a leading institution of multidisciplinary research encompassing seven Catalan research centres of excellence. By fostering collaboration among members of its diverse scientific community, BIST aims to play a leading role in pushing the frontiers of science while becoming a global reference for training outstanding research talent.





# FROM RESEARCH TO MARKET: Transforming Basic Science into 50 Spinoffs

- 52 startups created, 41 active
- Health / Energy and Sustainability / Computing and Communications
- These spin-offs have raised over 200 M€ in funding





# 6. Contact people

# BIST contact people for the programme



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