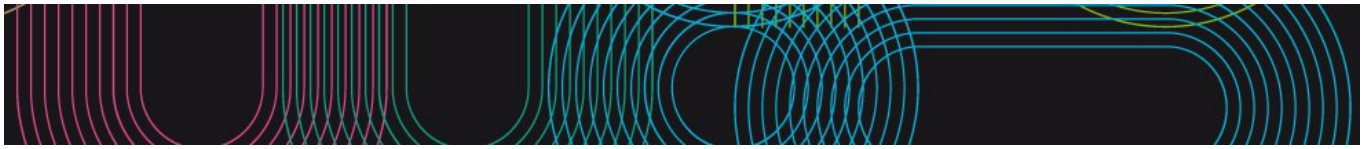

IDENTIFYING DATA				
Entrepreneurship and Professional Career Development				
Subject	Entrepreneurship and Professional Career Development			
Code	V02M123V01216			
Study programme	(*)Máster Universitario en Ciencias Biolóxicas: Bioloxía Molecular, Computacional e Ambiental e Bio-Industrias			
Descriptors	ECTS Credits	Type	Year	Quadmester
	6	Optional	1st	2nd
Language	English			
Department				
Coordinator	González Loureiro, Miguel			
Lecturers	González Loureiro, Miguel			
E-mail	mloureiro@uvigo.es			
Web	http://webs.uvigo.es/migonlou			
General description	This subject aims at developing the essential competencies related with an entrepreneurial orientation in the Biotech Industry. The abilities to manage a venture and people are the critical learning outcomes, along with the knowledge of the entrepreneurial process			

Competencies		
Type A	Code	Competences Specific
	A1	(*)To know the scientific method and the correct use of the scientific terminology as well as to acknowledge the contribution that scientific research provides to the overall knowledge and professional practice.
	A2	(*)Ability to describe and to analyse biological diversity, the mechanisms determining the interactions with the biotic and abiotic environment and being able to select those which might have technical applications.
	A3	(*)Ability to manage and/or to develop basic tools for validating and analysing data by means of statistics and bioinformatics.
	A4	(*)To know the ethical and legal aspects governing the collection and the handling of biological samples, organisms and habitats.
	A5	(*)Ability to design, evaluate and implement models of biological structures, systems and processes.
	A6	(*)To learn the sampling techniques and the instrumental methodologies, in the field and laboratory, for their application in the Biological Sciences
	A7	(*)To have an integrated view of the R&D processes and their possible transfer to the industrial sector. Planning and supervising facilities together with managing their human and economic resources.
	A8	(*)Ability to classify, evaluate, conserve, restore and manage natural and productive systems. Developing and implementing land management and sustainability plans.
	A9	(*)To understand and know how to apply quality control systems and safety protocols in any biological laboratory of the public or private sector.
	A10	(*)To acquire the professional ability to teach and spread Biology and to offer expertise advice for elaborating scientific, technical and socioeconomic biology reports. Address environmental consulting.

	A11	(*)To perform an individual Master Project (critical and in-depth study) under the supervision of a tutor in a research or working environment demonstrating that skills have been acquired.

Type B	Code	Competences Transversal
	B1	(*)Dissemination of results and conclusions of the biological studies, in oral and written English, through complex presentations that address ideas related with R&D in Biology.
	B2	(*)Managing computational, laboratory, field and industrial techniques in order to obtain, process and apply the acquired information.
	B3	(*)Disseminating and broadcasting ideas in contexts both academic and non-specialised.
	B4	(*)Reflecting on social and ethical responsabilities.

Learning aims

Subject competences	Typology	Competences
To understand the Bio-Tech industry: global and competitive environment affecting entrepreneurship	know Know How Know be	A7 A10 B3 B4
To start and to manage a new venture in the Bio-Tech industry	know Know How Know be	A6 A7 A10 B2 B3
To understand and to apply specific managerial techniques to achieve the best of the human resource	know Know How Know be	A10 B1 B2 B3 B4

Contents

Topic	
1. The Entrepreneurial process	The entrepreneur. The idea. The Business Plan. Entrepreneurial mind-set. Stages of the Entrepreneurial process. Academic Entrepreneurship. Corporate entrepreneurship Specific tools: * Business Opportunities in the bio-tech industry (wood, textile, food...)
2. Initiating entrepreneurial ventures in the Bio-Tech industry	Methodologies to create a new venture: the Business Model Canvas model. Structure of the plan to implement the new venture. Specific tools: * matrix to assess entrepreneurial opportunities *the business model canvas
3. Implementing the Plan for establishing a new venture	Pathways to entrepreneurial ventures. Plans on minimum Investment required Specific tools: * sheet to estimate required budget * schedule of tasks/responsibilities/deadlines
4. Rising funds	Financial statements. Sources of capital. Characteristics of the Bio-Tech industry in terms of finance. Specific tools: * balance sheet. * Earnings & loses sheet * some critical ratios * the Pitch Elevator

5. The Business Plan	Parts of the Business Plan. The business model. Specific tools: * the business plan template
6. Some strategies for the future: survival & growth	Growth strategies. Survival strategies Specific tools: * Retrenchment & Recovery actions
7. Managing a new venture: the social and human dimensions	Key capabilities. Tools for non-managers to manage a new venture. The Human Resource Management-HRM process Specific tools: * career plan

Planning

	Personalized attention	Assessment	Ordinary class hours A	Face-to-face hours outside the classroom Guided academic environment B	Student's work factor C	Outside the classroom hours D	Total hours (A+B+D) E
Master Session	☐	☐	7	0	3	21	28
Workshops	☒	☒	20	0	1	20	40
Jobs and projects	☐	☒	3	0	0	79	82
Total hours E:							150
Work load in UVIGO ECTS credits:							6

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Master Session	Individual lectures introducing main topics of about 1 hour each session.
Workshops	Case studies for the application of key concepts to actual situation and contexts. After working in groups, one of them will be selected for introducing its proposed solution. We will have time for active discussions on key issues of both the case study and the project of venture creation

Personalized attention

	Description
Workshops	The professor will walk around the groups in order to draw the group's attention to the key issues, while encouraging active discussion within the group

Assessment

	Description	Qualification
Workshops	Individual assessment of managerial abilities: how the student have engaged in discussion and have contributed during workshops	40
Jobs and projects	Individual project of venture creation following the roadmap that the professor will provide at the beginning of the course. Feasibility and internal consistency will be the key issues assessed, as well as the ability to present the project in a pitch elevator simulation	60

Other comments and second call

The project can be reviewed upon the professor request until it meet the minimum standard.

RECOMMENDATIONS:
It is strongly recommended but not essential that students have course some of the track subjects during the 1st term

Sources of information

Basic Reference:

Kuratko (2014). Entrepreneurship. Theory, process, practice. International edition (9e), Cengage Learning

Other references:

Jeffry A. Timmons and Stephen Spinelli (2009): New venture creation : entrepreneurship for the 21st century / International ed., 8th ed.-- Boston ; Madrid [etc.] : McGraw-Hill/Irwin, ISBN 978-0-07-127632-0

Business Websites

ASEBIO: Spanish Association of Bio-Tech Enterprises. http://www.asebio.com/
BIOTEGA: Galician Cluster of Bio-Tech Industry: http://www.biotega.org/
Guide of Business Opportunities in the Bio-Tech industry within the Euro-Region Galicia-Northern Portugal: http://www.bioemprende.eu/

Recommendations

Subjects that are recommended to be taken simultaneously

Human Resources Management and Leadership/V02M123V01213
Innovation, R&D Management and Intellectual Property in Bio-Industries/V02M123V01215

Subjects that it is recommended to have taken before

Financial and Global Bio-Industries Business/V02M123V01214
Introduction to Bio-Industries Management and Business Development in Life Sciences/V02M123V01114
Bio-Industries Marketing and Commercial Management/V02M123V01115

Other comments

Basic knowledge of business management and related issues is not essential. However, it is strongly recommended that students have taken / take those subjects related with Business Management, since this subject will integrate their contents