

63107 - The SME-Biotech: characteristics, creation and management

Syllabus Information

Academic Year: 2019/20

Subject: 63107 - The SME-Biotech: characteristics, creation and management

Faculty / School: 100 - Facultad de Ciencias

Degree: 572 - Master's in Quantitative Biotechnology

ECTS: 4.0

Year: 1

Semester: Second semester

Subject Type: Optional

Module: ---

1.General information

1.1.Aims of the course

The expected results of the course respond to the following general aims:

The observation of business activity reveals that 99% of firms in a country are small and medium enterprises. SMEs are characterized by a number of employees less than 250 or by revenues less than 50 million euros.

SMEs are key agents in the richness and employment creation into a country. This justifies the interest of understanding their characteristics. In a context of SMEs, this course aims to introduce students to the creation process of a new company or, in other words, to entrepreneurship. This process requires an integrating consideration of the different functional areas of a company. The business plan becomes a key tool to make a diagnosis of the viability of a new business project from this integrating perspective. The business plan will allow to value the potential of the new firm to generate profits and survive into the market.

1.2.Context and importance of this course in the degree

The SME-biotech: characteristics, creation and management is an optional course included in study programme of the Master in Quantitative Biotechnology of the University of Zaragoza. This course offers an introduction to key managerial tools that entrepreneurs should consider in order to evaluate the profitability of a new project.

1.3.Recommendations to take this course

This subject constitutes a first approach to the entrepreneurial process of a firm and/or new project. As the subject is eminently practical, students should attend the lectures on a regular basis and participate in the different activities that will be carried out in them.

2.Learning goals

2.1.Competences

After completing the course, the student will be competent in the following skills:

Specific competences:

1. Making decisions and managing business organizations.
2. Knowing the operations of all the functional areas of any company or organization and having the skills to perform any task within these areas.
3. Evaluating the situation and the previous evolution of firms and organizations, and being able to acquire the relevant knowledge for taking informed decisions successfully.
4. Elaborating and writing comprehensive management projects for companies and other entities.
5. Issuing reports about specific market situations, industries, organizations, companies and their functional areas.

General/basic competences:

1. Organizing, analysing, interpreting and summarize information.
2. Analysing and searching for information from different sources.
3. Self-studying capabilities.
4. Ability to put theoretical concepts into practice and solving problems in new or less familiar environments.
5. Problem-solving capability.
6. Being able to work in interdisciplinary and international work teams.
7. Developing skills toward self-criticism and criticism.
8. Decision-making capabilities according to social, ethical and legal responsibilities.
9. Being able to develop a project and participate in bibliography research, experiment planning, and interpretation and diffusion of results.
10. Acquiring knowledge to be original and innovative in the use and/or development of ideas.
11. Being able to integrate knowledge to evaluate situations in context of limited or incomplete information and reflecting on their social and ethical consequences.
12. Communicating conclusions and knowledge to specialized and unspecialized audience.

Transversal competences

1. Managing resources and time in an appropriate way to solve problems or to develop a project
2. Communicating conclusions and knowledge in a clear and unambiguous way to specialized and unspecialized audience.
3. Transmitting information in oral, written or graphical forms using the appropriate presentation tools and with time or space limitations
4. Fluency in English (understanding scientific texts, report writing, talks, colloquies, presentations...)
5. Using ITCs as a tool for expression and communication
6. Acquiring knowledge to be original and innovative in the use and/or development of ideas.
7. Developing technological applications of biochemical processes and transferring solutions to the food, chemical, cosmetic, pharmaceutical and health sectors.

2.2.Learning goals

The student, in order to pass the course, will have to show her/his competence in the following skills:

1. Identify the main characteristics that define the small and medium enterprise (SME).
2. Develop a business plan to analyse the strategic, commercial, technical and economic viabilities of a new business idea and their interrelationships.
3. Value the potential profitability that a firm offers according to the analysis of a set of basic dimensions through the business plan.
4. Make a diagnosis of the general viability of the new project and its limitations.

2.3.Importance of learning goals

Entrepreneurship has become a phenomenon of paramount importance that is receiving increasing attention in recent years. On the one hand, entrepreneurship is linked to economic growth of a territory. On the other hand, the type of firm analysed in the course (SME) represents 99% of firms in a country. Therefore, to understand in detail the problems of SMEs seems crucial for students to acquire a detailed knowledge of business reality.

This course offers students the key concepts and tools to understand the problems of the SMEs, as well as the concepts and techniques to develop a business plan. In this context, the course develops a range of attitudes and skills that motivate students for entrepreneurship. Thus, the subject aims to encourage and revitalise SMEs as a means of economic, social and of job creation progress.

In order to achieve the above results, the course must look outward to offer students a more pragmatic and realistic view of the entrepreneurial process. Moreover, the subject provides students with real role models which will help to promote the entrepreneurial spirit among them.

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

Assessment tasks:

The student will prove that she/he has achieved the expected learning results by means of the following assessment tasks:

- Development and presentation of a business model. This could be developed in groups of 2-4 people. The document that describes the business model should be around 5 pages and develop each one of the nine blocks included into the CANVAS model, as well as other relevant information.
- Development and presentation of a business plan based on the prior business model. The document should not exceed 40 pages and should include the following sections:
 - Introduction that summarizes the origin and justification of the idea, as well as the opportunity for starting-up.
 - Strategic viability (analysis of general and specific environment).
 - Commercial viability (analysis of demand, marketing plan, product design...).
 - Technical viability (location, production process...)
 - Economic-financial viability (financing sources, expected profitability...).
 - Conclusions

For both business model and plan, the corresponding mark will be the same for all members of the group (except if teachers observe evident asymmetries in the effort of students).

- Final exam - on the date approved by the centre during the exam period in the academic calendar. This exam will have a test, with a theoretical approach. The student will have to demonstrate her/his knowledge of the concepts from the programme and to interrelate them.

-Students should also participate in those activities that professors propose through the moodle2 platform, such as the resolution of exercises and discussion of articles.

Assessment criteria:

The student will have to demonstrate the achievement of the learning results and skills through a global evaluation. The final mark of the course will be distributed in the following way:

- Final exam (25% of final mark).
- CANVAS Business model (20% of final mark).
 - Five pages document (15%).
 - Oral presentation (5%)
- Resolution of exercises proposed during the course (5%)
- Business plan (50% of final mark).
 - First report including introduction, strategic and commercial viability (20%).
 - Second report including technical, legal and economic-financial viability and conclusions (20%).
 - Oral presentation (10%).

In the evaluation of each assessment activity, the students will have to demonstrate that they know, understand and are able to use the concepts and tools explained in class. Moreover, their capability to apply, integrate and synthesize the knowledge acquired will be evaluated.

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as:

- Regular attendance to classes
- Reading and studying the reading materials for each chapter
- Developing a business plan that analyzes in depth the creation process of a new firm.
- Asking doubts and difficulties that arise in the study of the course contents.

4.2.Learning tasks

The course includes the following learning tasks:

- Theory sessions: 15 hours.
- Practice sessions: 25 hours.

4.3.Syllabus

The course will address the following topics (provisional syllabus):

INTRODUCTION

1. THE ROLE OF SMEs IN ECONOMIC ACTIVITY

- 1.1. Entrepreneurship: concepts, data and facts
- 1.2. Innovation vs. invention
- 1.3. Characteristics and importance of SMEs
- 1.4. GEM Aragon report
- 1.5. The entrepreneurship process
- 1.6. The process of idea generation: creativity and CANVAS model

2. DEVELOPMENT OF A BUSINESS PLAN

- 2.1. Project development
- 2.2. Strategic analysis
- 2.3. Marketing plan
- 2.4. Technical analysis
- 2.5. Financial analysis
- 2.6. The lean start-up approach

3. LEGAL ISSUES OF BUSINESS

- 3.1. Legal structure for the business
- 3.2. Legal procedures for starting a business
 - 3.2.1. Name of the company
 - 3.2.2. Statutes, public document, registration and licensing
 - 3.2.3. Fiscal and accounting procedures
- 3.3. Appropriability mechanisms: patent and secret

4. BUSINESS FINANCING

- 4.1. Introduction
- 4.2. Venture capital companies
- 4.3. Mutual guarantee societies
- 4.4. Other sources of SMEs financing

4.4. Course planning and calendar

Further information concerning the timetable, classroom, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the course's Moodle page and the webpage of the centres where the course is taught.

The activities and key dates will be communicated via the Universidad de Zaragoza e-learning platform (moodle2). The timetable of assessment activities can be consulted in the webpage of the centres where the course is taught.

4.5. Bibliography and recommended resources

http://biblos.unizar.es/br/br_citas.php?codigo=63107&year=2019