

## COURSE OUTLINE “PRINCIPLES OF ENTREPRENEURSHIP IN BIOSCIENCES”

### 1. GENERAL

<b>SCHOOL</b>	HEALTH SCIENCES		
<b>DEPARTMENT</b>	MOLECULAR BIOLOGY AND GENETICS		
<b>STUDY LEVEL</b>	ISCED LEVEL 6		
<b>COURSE CODE</b>	<b>MBG509</b>	<b>SEMESTER</b>	6 <sup>th</sup> and 8 <sup>th</sup>
<b>COURSE TITLE</b>	PRINCIPLES OF ENTREPRENEURSHIP IN BIOSCIENCES		
<b>TEACHING ACTIVITIES</b>	<b>HOURS/WEEK</b>	<b>ECTS CREDITS</b>	
<i>In case credits are awarded to individual components of the course eg. Lectures, laboratory practicals, etc. If credit units are awarded for the whole course, indicate the weekly teaching hours and total credits</i>	2	3	
<b>COURSE TYPE</b> <i>General, Background, Scientific field course, Expertise Course, Skills Development etc</i>	GENERAL KNOWLEDGE		
<b>PREREQUISITE COURSES:</b>	NO		
<b>LANGUAGE OF TEACHING AND EXAMINATIONS:</b>	GREEK ENGLISH FOR ERASMUS STUDENTS		
<b>THE COURSE IS OFFERED TO ERASMUS STUDENTS</b>	YES		
<b>COURSE WEBSITE (URL)</b>	<a href="https://eclass.duth.gr/courses/418311/">https://eclass.duth.gr/courses/418311/</a>		

### 2. LEARNING OUTCOMES

<p><b>Learning outcomes</b> Describe the learning outcomes of the course, the specific knowledge, skills and competencies that students will acquire after successfully completing the course. Refer to Appendix A.</p> <ul style="list-style-type: none"> <li>• Description of learning outcomes for the course according to the level of study - refer to the European Higher Education Area Qualifications Framework</li> <li>• Descriptive Indicators of Levels 6, 7 &amp; 8 of the European Qualifications Framework for Lifelong Learning and Annex B Curriculum Vitae Summary Guide</li> </ul>			
<p>Upon successful completion of the course, the student will:</p> <ul style="list-style-type: none"> <li>- be able to identify and understand business fields related to life sciences (pharmaceutical companies, biotechnology industry, health services, etc.),</li> <li>- be able to understand the regulatory framework governing business activities in the life sciences field,</li> <li>- be able to formulate strategies for developing innovation and transferring technology from research to production, aiming at commercially viable products and services,</li> <li>- have developed skills in presenting, collecting and analyzing information, and searching bibliographic databases and the ability to evaluate research results.</li> </ul>			
<p><b>General Skills</b> Which of the general competencies that the student will have acquired on the completion of the studies (see also the Diploma Supplement and below) are relevant to this course?</p> <table style="width: 100%; border: none;"> <tr> <td style="vertical-align: top; width: 50%;"> <ul style="list-style-type: none"> <li>Research, analysis and synthesize of data and information, using the necessary technologies</li> <li>Adaptation to new situations</li> <li>Decision making</li> <li>Autonomous work</li> <li>Team work</li> <li>Work in an international environment</li> </ul> </td> <td style="vertical-align: top; width: 50%;"> <ul style="list-style-type: none"> <li>Work in an interdisciplinary environment</li> <li>Production of new research ideas</li> <li>Project design and management</li> <li>Respect for diversity and multiculturalism</li> <li>Respect for the natural environment</li> <li>Development of social, professional and moral responsibility and gender sensitivity</li> <li>Promotion of free, creative and inductive thinking</li> </ul> </td> </tr> </table>		<ul style="list-style-type: none"> <li>Research, analysis and synthesize of data and information, using the necessary technologies</li> <li>Adaptation to new situations</li> <li>Decision making</li> <li>Autonomous work</li> <li>Team work</li> <li>Work in an international environment</li> </ul>	<ul style="list-style-type: none"> <li>Work in an interdisciplinary environment</li> <li>Production of new research ideas</li> <li>Project design and management</li> <li>Respect for diversity and multiculturalism</li> <li>Respect for the natural environment</li> <li>Development of social, professional and moral responsibility and gender sensitivity</li> <li>Promotion of free, creative and inductive thinking</li> </ul>
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### 3. COURSE CONTENT

<ol style="list-style-type: none"> <li>1. Introduction-Basic principles of entrepreneurship.</li> <li>2. Career options of bioscientists except education.</li> <li>3. Inventions and innovation.</li> <li>4. Biotechnological research and development.</li> <li>5. Biotechnological innovation and entrepreneurship.</li> </ol>
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6. Entrepreneurship and connection to life sciences.
7. National Organization of Medicine and the pharmaceutical industry.
8. Standards and legal framework for medical devices.
9. Design and clinical development of medicines.
10. Management and overall quality management. Scientific support and marketing.
11. Methodological approach for estimating the value proposition of innovative products.
12. Business model development. Business canvas - Sources of financing.
13. Interviewing a prospective employer (drafting a cover letter and resume, interviewing, good professionalism and ethics).

#### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>TYPE OF TRAINING</b> <i>Face-to-face, Distance learning, etc..</i>	Face to face																
<b>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</b> <i>Use of ICT in teaching, laboratory education, and in communication with the students</i>	Use of ICT in Teaching Use of ICT in Communication with students																
<b>MODES OF DELIVERY</b> <i>Describe the teaching methods in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, practicum, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc. The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	<b>Teaching-Learning Methods</b> Lectures and use of e-class and new technologies. Study and analysis of scientific literature. Writing work and oral presentation of a business plan. <table border="1" style="margin-top: 10px;"> <thead> <tr> <th style="background-color: #e1e1e1;">Activity</th> <th style="background-color: #e1e1e1;">Workload/semester</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>20</td> </tr> <tr> <td>Seminars</td> <td>20</td> </tr> <tr> <td>Study and analysis of bibliography</td> <td>20</td> </tr> <tr> <td>Interactive teaching</td> <td>10</td> </tr> <tr> <td>Project</td> <td>10</td> </tr> <tr> <td>Essay writing</td> <td>10</td> </tr> <tr> <td><b>Course Total</b></td> <td><b>90</b></td> </tr> </tbody> </table>	Activity	Workload/semester	Lectures	20	Seminars	20	Study and analysis of bibliography	20	Interactive teaching	10	Project	10	Essay writing	10	<b>Course Total</b>	<b>90</b>
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<b>STUDENT PERFORMANCE EVALUATION</b> <i>Describe of the methods of evaluation language, methods of evaluation, types of exams, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other Are evaluation criteria known to the students?</i>	<b>Student evaluation languages</b> Greek, English  <b>Method (Formative or Concluding)</b> Formative  <b>Student evaluation methods</b> Written Assignment (50%) Presentation in audience (50%)																

#### 5. SUGGESTED BIBLIOGRAPHY

- A. Title: Entrepreneurship and Small Business: Start-up, Growth and Maturity  
 Authors: I. P. Burns  
 Publisher: Klidarithmos S. A.  
 Publication year: 2020 (4<sup>th</sup>)  
 Eudoxus code: 94644184
- B. Title: Innovation and Entrepreneurship  
 Authors: I. Karagiannis, I. Mpakouros

Publisher: Sofia S. A.  
Publication year: 2010  
Eudoxus code: 1104

C. Title: Entrepreneurship and Innovation  
Authors: D. Soumpeniotis & I. Tampakoudis  
Publisher: Afoi Karagiorgou S. A.  
Publication year: 2019 (1<sup>st</sup>)  
Eudoxus code: 86201100

***Course Notes***

Course notes are available through the e-class platform