

COURSE OUTLINE

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
DEPARTMENT	FOOD SCIENCE AND TECHNOLOGY		
LEVEL OF COURSE	UNDERGRADUATE		
COURSE CODE	FST_101	SEMESTER OF STUDIES	1 st
COURSE TITLE	BIOLOGY		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>	WEEKLY TEACHING HOURS	ECTS CREDITS	
Lectures	3		
Exercises	2		
Total	5	5	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Compulsory Specialised general knowledge		
PREREQUISITE COURSES:	There are not prerequisite courses		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek.		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBPAGE (URL)	https://eclass.upatras.gr/		

2. LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i> <p>The aim of the course is to provide the students with the basic knowledge of the biology, starting from the chemical substance of life, analyzing the structure and function of the cell and finally dealing with genetics and molecular biology issues.</p> <p>With the completion of this course the students will be able to:</p> <ol style="list-style-type: none"> 1. Understand the basic principles concerning the chemistry of life 2. Understand and analyze the principles and concepts of biology 3. Know the nature, origin and structuring of life 4. Understand and analyze the structure and the basic processes that characterize the
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<p>eucaryotic and procaryotic cell</p> <ol style="list-style-type: none"> 5. Know the basic issues concerning the role and the structure of the genetic matter 6. Know the basic characteristics of the cell cycle 7. Understand the processes of replication, transcription and translation. 8. Understand the functions of the metabolism 9. Search and find information in the references 																
<p>General Competences</p> <p><i>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</i></p> <table border="0"> <tr> <td><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> </tr> <tr> <td><i>Adapting to new situations</i></td> <td><i>Adapting to new situations</i></td> </tr> <tr> <td><i>Decision-making</i></td> <td><i>Decision-making</i></td> </tr> <tr> <td><i>Working independently</i></td> <td><i>Working independently</i></td> </tr> <tr> <td><i>Team work</i></td> <td><i>Team work</i></td> </tr> <tr> <td><i>Working in an international environment</i></td> <td><i>Working in an international environment</i></td> </tr> <tr> <td><i>Working in an interdisciplinary environment</i></td> <td><i>Working in an interdisciplinary environment</i></td> </tr> <tr> <td><i>Production of new research ideas</i></td> <td><i>Production of new research ideas</i></td> </tr> </table>	<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Adapting to new situations</i>	<i>Adapting to new situations</i>	<i>Decision-making</i>	<i>Decision-making</i>	<i>Working independently</i>	<i>Working independently</i>	<i>Team work</i>	<i>Team work</i>	<i>Working in an international environment</i>	<i>Working in an international environment</i>	<i>Working in an interdisciplinary environment</i>	<i>Working in an interdisciplinary environment</i>	<i>Production of new research ideas</i>	<i>Production of new research ideas</i>
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<p>Decision-making</p> <p>Working independently</p> <p>Teamwork</p> <p>Project planning and management</p> <p>Working in an interdisciplinary environment</p>																

3. SYLLABUS

<ol style="list-style-type: none"> 1. The chemistry of life 1. Structure and function of biological molecules 2. The principles and concepts of biology 3. Phylogeny, classification 4. Eucaryotic and procaryotic cell 5. Structure and function of the biological membranes 6. Structure and function of the cell parts 7. Cell cycle 8. Metabolism 9. Respiration 10. Photosynthesis 11. The molecular basis of inheritance 12. From gene to proteins 13. Mutations and evolution
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4. TEACHING AND LEARNING METHODS - EVALUATION

<p>DELIVERY</p> <p><i>Face-to-face, Distance learning, etc.</i></p>	Face-to-face						
<p>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</p> <p><i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<p>Use of Information and Communication Technologies (ICTs) (e.g. powerpoint) in teaching.</p> <p>Communication with students: through e-mail, department's website and platform e-class.</p> <p>The lectures content of the course for each chapter are uploaded on the internet, in the form of a series of .pdf files, where students can freely download them from the platform e-class.upatras.gr</p>						
<p>TEACHING METHODS</p> <p><i>The manner and methods of teaching are described in detail.</i></p>	<table border="1"> <thead> <tr> <th>Activities</th> <th>Work Load per semester</th> </tr> </thead> <tbody> <tr> <td>Lectures (3 hours per week x 13 weeks)</td> <td>39</td> </tr> <tr> <td>Seminars (1 hour per week x 13 weeks)</td> <td>13</td> </tr> </tbody> </table>	Activities	Work Load per semester	Lectures (3 hours per week x 13 weeks)	39	Seminars (1 hour per week x 13 weeks)	13
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<i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i>	13 weeks)	
	Final examination (3 hours)	3
	Non-guided study	70
	Total number of hours for the Course (25 hours of work-load per ECTS credit)	125
<p><i>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></p>		
<p>STUDENT PERFORMANCE EVALUATION</p> <p><i>Description of the evaluation procedure</i></p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, 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</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	Written examination after the end of the semester	

5. ATTACHED BIBLIOGRAPHY

- Alberts B., Bray D., Hopkin K., Johnson A., Lewis J., Raff M., Roberts K., Walter P. (2015) Βασικές αρχές Κυτταρικής Βιολογίας, ISBN:9789963258277, Ιατρικές Εκδόσεις Π.Χ. Πασχαλίδης
- Campbell N.A., Reece J.B. (2015) Βιολογία (ΤΟΜΟΣ Ι), ISBN: 978-960-524-306-7, Πανεπιστημιακές Εκδόσεις Κρήτης
- Cooper G.M., Hausman R.E. (2011) Το Κύτταρο, Μια μοριακή προσέγγιση (ΤΟΜΟΙ Α+Β), ISBN: 978-960-99895-2-7, Ακαδημαϊκές εκδόσεις Ι. Μπάσδρα & ΣΙΑ Ο.Ε
- Μαργαρίτης Λ.Χ., Γαλανόπουλος Β.Κ., Κεραμάρης Κ.Ε., Μαρίνος Ε.Σ., Παπασιδέρη Σ., Στραβοπόδης Δ.Ι., Τρουγκάκος Ι.Π. (2004) Βιολογία Κυττάρου, ISBN: 960-372-077-1, Ιατρικές Εκδόσεις Λίτσας
- Ματθόπουλος Δ. (2005) Γενικές Αρχές Βιολογίας, ISBN: 960-402-184-2, Εκδόσεις Τυπωθήτω - Γ. Δαρδανός