

## COURSE OUTLINE

### 1. GENERAL

<b>SCHOOL</b>	AGRICULTURAL SCIENCES		
<b>ACADEMIC UNIT</b>	CROP SCIENCE		
<b>LEVEL OF STUDIES</b>	UNDERGRADUATE		
<b>COURSE CODE</b>	CRS_ 102	<b>SEMESTER</b>	1 <sup>st</sup>
<b>COURSE TITLE</b>	General Biology		
<b>INDEPENDENT TEACHING ACTIVITIES</b> <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>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
lectures	3		
laboratory 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>			
<b>COURSE TYPE</b> <i>general background, special background, specialised general knowledge, skills development</i>	SPECIAL BACKGROUND		
<b>PREREQUISITE COURSES:</b>	Typically, there are not prerequisite course.		
<b>LANGUAGE OF INSTRUCTION and EXAMINATIONS:</b>	Greek		
<b>IS THE COURSE OFFERED TO ERASMUS STUDENTS</b>	No		
<b>COURSE WEBSITE (URL)</b>			

### 2. LEARNING OUTCOMES

<p><b>Learning outcomes</b>  <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>            Consult Appendix A</p> <ul style="list-style-type: none"> <li>• <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i></li> <li>• <i>Descriptors for Levels 6, 7 &amp; 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i></li> <li>• <i>Guidelines for writing Learning Outcomes</i></li> </ul>			
<p>By the end of this course, the student will be able to:</p> <ul style="list-style-type: none"> <li>• know about the organisms' origin and evolution</li> <li>• understand the interaction between organisms and their environment</li> <li>• know basic aspects about the organisms' structure and functions</li> <li>• recognize basic biology laboratory techniques</li> </ul>			
<p><b>General Competences</b>  <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 style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <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>Decision-making</i>  <i>Working independently</i>  <i>Team work</i>  <i>Working in an international environment</i>  <i>Working in an interdisciplinary environment</i>  <i>Production of new research ideas</i> </td> <td style="width: 50%; vertical-align: top;"> <i>Project planning and management</i>  <i>Respect for difference and multiculturalism</i>  <i>Respect for the natural environment</i>  <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>  <i>Criticism and self-criticism</i>  <i>Production of free, creative and inductive thinking</i>  <i>.....</i>  <i>Others...</i> </td> </tr> </table>		<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>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i>	<i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>.....</i> <i>Others...</i>
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By the end of this course the student will, furthermore, have developed the following skills (general abilities):

1. Ability to understand a) the basic rules governing the phenomenon of life b) the principles of the cell structure and function.
2. Ability to use this knowledge in more specific subjects of biology.
3. Skills to study and find information from scientific books and web sites and databases.
4. Ability to interact with others on general biology problems.

Generally, by the end of this course the student will, furthermore, have developed the following general abilities:

*Search for, analysis and synthesis of data and information, with the use of the necessary technology*  
*Working independently*  
*Respect for the natural environment*  
*Promotion of free, creative and inductive thinking*

### 3. SYLLABUS

1. Introduction to Biology.
2. The chemistry of life.
3. Large biological molecules.
4. The cell: a fundamental unit of life.
5. Comparison between plant and animal cells.
6. Energy and organisms.
7. Cell division.
8. Chromosomes and heredity.
9. Evolution of organisms.
10. Microorganisms.
11. Fungi and plants.
12. Animals.
13. Introduction to Ecology.

Laboratory exercises:

- Health and safety rules in the laboratory.
- Experimental tools of biology.
- Microscopy.
- Photometry and spectrophotometry.
- Cell fractionation.
- Chromatography.

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b> <i>Face-to-face, Distance learning, etc.</i>	Face-to-face lectures and laboratory exercises.	
<b>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</b> <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> <li>• Use of Information and Communication Technologies (ICTs) (e.g. powerpoint) in teaching.</li> <li>• Use of ICTs in student communication (learning support through the e-class platform).</li> </ul>	
<b>TEACHING METHODS</b> <i>The manner and methods of teaching are described in detail.</i>	<b>Activity</b>	<b>Semester workload</b>
	Lectures (3 conduct hours per week x 13 weeks)	39

<p><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></p> <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>Laboratory exercises (2 conduct hours per week x 5weeks)</p>	<p>10</p>
	<p>Hours for private study of the student and preparation for mid-term or/and final examination – Participation in the examinations</p>	<p>76</p>
	<p>Course total</p>	<p><b>125 hours</b></p>
<p><b>STUDENT PERFORMANCE EVALUATION</b></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>	<ol style="list-style-type: none"> <li>1. Optionally, two mid-term examinations, the first in the middle and the second at the end of the semester. The evaluation procedure is conducted with short answer questions and/or open-ended questions and/or multiple choice questionnaires and/or oral examination, as well as questions based on laboratory exercises. The final examination grade is the mean mark. It is mandatory to obtain pass grade (<math>\geq 5</math>) in each examination.</li> <li>2. Written examination after the end of the semester. The evaluation procedure is conducted with short answer questions and/or open-ended questions and/or multiple choice questionnaires and/or oral examination, as well as questions based on laboratory exercises (unless the student has successfully participated the mid-term examinations). Minimum passing grade: 5.</li> <li>3. All the above are taking place in Greek.</li> </ol>	

## 5. ATTACHED BIBLIOGRAPHY

<ol style="list-style-type: none"> <li>1. E. Simon, Βιολογία: βασικές έννοιες, Εκδόσεις ΠΑΡΙΣΙΑΝΟΥ.</li> <li>2. N. A. Campbell et al., Βιολογία, Τόμος Ι, Πανεπιστημιακές Εκδόσεις Κρήτης.</li> <li>3. D. Sadava et al., Η επιστήμη της Βιολογίας, Γενική Βιολογία – Γενετική – Εξέλιξη, Εκδόσεις Παπαζήση</li> <li>4. P. E. Solomon et al., Βιολογία, Εκδόσεις BROKEN HILL PUBLISHERS LTD.</li> </ol>
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