

COURSE OUTLINE

1. GENERAL

SCHOOL	FOOD, BIOTECHNOLOGY AND DEVELOPMENT		
ACADEMIC UNIT	BIOTECHNOLOGY		
LEVEL OF STUDIES	BACHELOR OF SCIENCE		
COURSE CODE	2	SEMESTER	3^o
COURSE TITLE	GENETICS & BIOLOGY OF PERENNIAL PLANTS		
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	CREDITS	
Lectures and Practicals	5	5	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (4).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Field of Science		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS :	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	eclass/courses/BIOTECH161/		

2. LEARNING OUTCOMES

LEARNING OUTCOMES

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.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Guidelines for writing Learning Outcomes

Upon successful completion of the course the student will:

- Understand the biological cycle and secondary growth of perennial plants
- Knowledge of how perennial plants adapt in different environments and their survival mechanisms
- Have perceived the water movement through the xylem of perennial woody plants
- Have knowledge of the evolution and genetic relationships of perennial plants

General Competences

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?

Search for, analysis and synthesis of data and information, with the use of the necessary technology
Adapting to new situations
Decision-making
Working independently
Team work
Working in an international environment
Working in an interdisciplinary environment

Production of new research ideas
Project planning and management
Respect for differences and multiculturalism
Respect for the natural environment
Showing social, professional and ethical responsibility and sensitivity to gender issues
Criticism and self-criticism
Production of free, creative and inductive thinking

- Independent work
- Teamwork
- Work in an interdisciplinary environment
- Generating new research ideas

3. SYLLABUS

- 1) Biological cycle of perennial woody plants
- 2) Secondary growth-Secondary tissues: cork, cork skin, secondary phloem, secondary xylem, reaction wood
- 3) Responsiveness, adaptability, survival mechanisms of perennial plants
- 4) Water Movement through the xylem of perennial plants
- 5) Biodiversity, evolutionary changes and phylogenetic analysis of perennial plants
- 6) Study and examination of external features and characteristics of the structure of perennial woody branches
- 7) Study and observation of bark and secondary xylem
- 8) Study and observation of transverse and radial sections of perennial woody plant executives
- 9) Study and observation of various details and growth layers of perennial woody plants

4. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	In the classroom	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Lectures: Power point presentations Support of learning process through e-class platform	
TEACHING METHODS <i>The manner and methods of teaching are described in detail. 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. 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>	Activity	Semester workload
	Lectures	39
	Lab exercises focusing on the secondary growth of perennial plants in small groups	26
	Autonomous study	60
	Course total (Total contact hours and training)	125
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure 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>	I. Final written examination (100%) including: - Multiple Choice or short answer and full essay questions	

<i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	
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5. ATTACHED BIBLIOGRAPHY

-Suggested bibliography :

-Relevant scientific journals:

(Βιολογία των φυτών)-Biology of Plants-Raven, Evert, Eichorn-2015

Utopia Publishers

(Φυσιολογία φυτών)- Plant Physiology -.Taiz, Zeiger 2013..... Utopia Publishers