

## COURSE OUTLINE

### 1. GENERAL

<b>SCHOOL</b>	AGRICULTURAL SCIENCES		
<b>ACADEMIC UNIT</b>	AGRICULTURE		
<b>LEVEL OF STUDIES</b>	UNDERGRADUATE		
<b>COURSE CODE</b>	AGR_204	<b>SEMESTER</b>	2 <sup>nd</sup>
<b>COURSE TITLE</b>	Systematic Botany		
<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>	GENERAL BACKGROUND		
<b>PREREQUISITE COURSES:</b>	There are no prerequisite courses, besides the general knowledge of the courses Biology.		
<b>LANGUAGE OF INSTRUCTION and EXAMINATIONS:</b>	Greek. Choice of teaching in English in case of the foreign students attending.		
<b>IS THE COURSE OFFERED TO ERASMUS STUDENTS</b>	Yes (in English)		
<b>COURSE WEBSITE (URL)</b>			

### 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*

The aim of this course is to familiarize students with the subject, objectives and principles of Systematic Botany. Upon completion of the course the student will be able to:

- Understand the basic principles and methodologies of plant study from a systematic point of view.
- To know the concept of species in plants and taxonomic systems.
- To know the basic morphological characteristics of the seven Divisions of the Plant Kingdom
- To know the basic characteristics of the important families of the Greek flora.

#### 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 difference 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*

*.....*

*Others...*

By the end of this course the student will, moreover, have developed the following skills (general abilities):

- Ability to demonstrate knowledge and understanding of key data, concepts, theories and applications related to Systematic Botanic.

- Ability to apply this knowledge and understanding to the solution of problems of non-familiar nature.
- Ability to adopt and apply methodologies to solve non-familiar problems.
- Study skills needed for continuing professional development.
- Ability to interact with others over natural or interdisciplinary problems.

Generally, by the end of this course the student will, furthermore, have developed the following general abilities (from the list above):

Research, analysis and synthesis of data and information, with the use of the necessary technologies

Adapting to new situations

Decision-making

Working independently

Criticism and self-criticism

Team work

Production of free, creative and inductive thinking.

### 3. SYLLABUS

Theory

1. Introduction and basic principles of Systematic Botany
2. Historical evolution of Systematic Botany
3. Concepts of plant species and plant population
4. Classification, taxonomy and nomenclature.
5. Basic morphological characteristics of the seven Divisions of the Plant Kingdom (Schizophyta, Phycophyta Mycophyta, Lichenophyta, Bryophyta, Pteridophyta, Spermatophyta)
6. Diagnostic characteristics of important families of the Greek flora.
7. Characteristics and classification of angiosperms, evolution, spreading advantages
8. Flowers and fruits of Angiosperm.
9. Pollination, fertilization, seed and fruit spreading
10. Significant families of Angiosperms (representative genus and species, major cultivated species).
11. Angiosperm- dicots
12. Angiosperm- monocots
13. Floral diversity of Greece.

Laboratory Exercises

- Principles of plant samples collection.
- Plant identification of important families of the Greek flora (Apiaceae, Asteraceae, Brassicaceae)
- Plant identification of important families of the Greek flora (Caryophyllaceae, Fabaceae, Lamiaceae)
- Plant identification of important families of the Greek flora (Liliaceae, Malvaceae, Poaceae)
- Plant identification of important families of the Greek flora (Rosaceae, Scrophulariaceae, Solanaceae, etc.)
- Preparation of an herbarium with plant material.

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b> <i>Face-to-face, Distance learning, etc.</i>	Face-to-face (Lectures in the class, lab and field exercises)	
<b>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</b> <i>Use of ICT in teaching, laboratory education, communication with students</i>	Distribution of power point presentations, e-books, videos, Educational process is supported by the online platform eclass.	
<b>TEACHING METHODS</b> <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,</i>	<b>Semester workload</b>	
	Lectures (3 contact hours per week x 13 weeks)	39
	Laboratory exercises (2 contact hours per week x 6)	12

<i>etc.</i>  <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>	weeks)	
	Written assignment	6
	Hours for private study of the student and preparation for mid-term or/and final examination – Participation in the examinations	68
	Course total	<b>125 hours</b>
<p align="center"><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>	<p>i. Written final examination of the lesson Minimum probable grade: 5.</p> <p>ii. All the above are taking place in the Greek language and for the foreign students (e.g. ERASMUS students) in English.</p> <p>iii. Oral examination can be made to students who have written tests on the same day and time that the progress or written examination of the course will take place.</p> <p>iv. Theory: Final Exam (60%) written of increasing difficulty, which may include Multiple choice test, Questions of brief answer, Questions to develop a topic, Judgment questions and Exercise solving.</p> <p>v. Laboratory: Final Exam (40%). The examination in the laboratory part of the course includes recognition of species of Greek flora and preparation of a herbarium.</p> <p>The final Course mark is the average of the marks on Theory and Lab.</p>	

## 5. ATTACHED BIBLIOGRAPHY

- Bartels A, 2011. Φυτά της Μεσογείου. ISBN: 9789604574681. Σελίδες: 366.
- Datta, SC, 1988. Systematic botany. New Age International.
- Μπαμπαλώνας Δ, Κοκκίνη Σ, 2004. Συστηματική Βοτανική: φυλογενετική – φαινετική προσέγγιση της ταξινόμησης των φυτικών οργανισμών. Εκδόσεις Αιβάζη. Θεσσαλονίκη, σελ. 421.
- Σαρλής Γ, 1999. Συστηματική Βοτανική-Εφαρμογές Κορμοφύτων. Εκδόσεις Αθ. Σταμούλης. 1η Έκδοση.