COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Agricultural Sciences		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	**CRS_405**	**SEMESTER**	**4th**
COURSE TITLE	**General Agriculture**		

INDEPENDENT TEACHING ACTIVITIES *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*	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures	2	
Tutorials	1	
Laboratory	2	
TOTAL	**5**	**5**
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		

COURSE TYPE *general background, special background, specialised general knowledge, skills development*	Background and Scientific Area
PREREQUISITE COURSES:	There are no prerequisite courses. it is desirable, however that they have obtained a pass grade in the course of "introduction to the science of biosystems"
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek .-For Erasmus students in English
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes
COURSE WEBSITE (URL)	

(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 student, at the end of the relevant Learning Process, is able

• Knows the principles of crop production with emphasis on large crops both in theory and in practice.

• To have acquired basic knowledge that will help him in the coming semesters to evaluate and select the production of competitive products, and the implementation of appropriate agricultural practices for the sustainable management of the rural environment.instrumental methods of chemical analysis)

• evaluates the results of a chemical analysis

• handles organology

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 *Project planning and management*

information, with the use of the necessary technology	*Respect for difference and multiculturalism*
Adapting to new situations	*Respect for the natural environment*
Decision-making	*Showing social, professional and ethical responsibility and*
Working independently	*sensitivity to gender issues*
Team work	*Criticism and self-criticism*
Working in an international environment	*Production of free, creative and inductive thinking*
Working in an interdisciplinary environment	*.....*
Production of new research ideas	*Others...*
	.....

At the end of this course the student will have further developed the following skills (general skills):

• Ability to demonstrate knowledge and understanding of concepts and applications related to agricultural crops.
• Ability to demonstrate knowledge and understanding of factors that are systematically related to efficient and sustainable agriculture
• Study skills needed for continuing professional development.
• Ability to interact with others in problems of an interdisciplinary nature.

In general, upon completion of this course the student will have further developed the following general skills (from the list above):

Search, analysis and synthesis of data and information, using the necessary technologies
Adaptation to new situations, Decision making, Autonomous and team work,
Respect for the natural environment, Promotion of free, creative and inductive thinking

(3) SYLLABUS

Effects of the aerial environment on the growth and yields of large crops
1.Solar radiation. Effects of solar radiation on crop productivity and possibilities for interventions to improve crop production.
2. Temperature. Effect on biological processes of plants. Extreme temperature damage General effects of temperatures in Georgia. Characterization of plants based on their thermal requirements. Possibilities of interventions to improve crop production.
3. Atmospheric Humidity. Rainfall. Time distribution is important for agriculture. Rainfall efficiency and possibilities of interventions to improve crop production.
4. Wind Direct and indirect effects of wind on plants and possibilities of interventions to improve crop production.
5. Evaporation capacity of the atmosphere. Effect on crop production. Water consumption of the plantation and irrigation planning.
6. Concentration of carbon dioxide. Impact on crop production and possibilities of interventions to improve crop production.
7. Photobiology. Effect of wavelength on plant growth and protection from enemies
II. Effects of variables of the soil environment on development and yields of large crops.
8. Texture, structure, porosity, temperature and water content, chemical and biological characteristics of the soil. Ways to improve crops.
9. Interventions in the territorial environment. Fertilization: inorganic, organic, green fertilization.

10. Soil treatment. Types and objectives. Effect on soil and plant characteristics. 11. Soil cultivation. Intervention time. Cultivation methods (intensive cultivation, reduced cultivation, soil uncultivation).
12. Crop rotation. Objectives and basic principles. Monoculture, set-aside, crop rotation in arid and irrigated areas, sowing and intermediate crops.
13. Production systems

The laboratory exercises in the course are group. They will be made by the students in the field of the Agriculture Laboratory by installing individual fields with large cultivated plants, monitoring and receiving observations of the growth of the plants throughout the semester. They also include a demonstration of cultivation work with cultivation machinery in the field and attendance of laboratory exercises related to plant development and application of agricultural techniques. Finally, each group of students will deliver assignments based on laboratory exercises.

(4) TEACHING and LEARNING METHODS - EVALUATION

<table>
<tr><td>DELIVERY
Face-to-face, Distance learning, etc.</td><td>Face to face deliveries.
Laboratory exercises in General and Analytical Chemistry</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
Use of ICT in teaching, laboratory education, communication with students</td><td>• Use of ICT (power point) in Teaching
• Use of ICT (power point) in Laboratory Training
• Use of ICT in Communication with students (Learning process support through the electronic platform e-class).</td></tr>
<tr><td>TEACHING METHODS
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</td><td>
<table>
<tr><th>Activity</th><th>Semester workload</th></tr>
<tr><td>Lectures</td><td>39</td></tr>
<tr><td>Laboratory</td><td>26</td></tr>
<tr><td>Writing short reports of laboratory exercises-Exams</td><td>40</td></tr>
<tr><td>Study hours and preparation for the laboratory exercises and the final examination</td><td>20</td></tr>
<tr><td>Course total</td><td>125</td></tr>
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<tr><td>STUDENT PERFORMANCE EVALUATION
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

Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</td><td>1. The laboratories participate by 30% in the final grade. In order to be examined in theory, the student must have completed all the laboratories and have been successfully examined in them.
2. The main assessment criteria focus on understanding and correlating the knowledge that students gain from the course with other knowledge. Particular emphasis is placed on whether they have developed the ability to apply this knowledge to crop selection and to assess the impact of these changes on the environment. Emphasis is also placed on demonstrating critical ability and justifying the choices they make in each problem.
3. Evaluation is dynamic. It mainly involves problem solving. is done orally or in writing or with a combination of the two, with or without pre-examination on the basic principles of the course, with or without exculpatory</td></tr>
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	advances and with other test or inventive methods, depending on the composition of the dynamics and the needs of the audience. 4. The above are done in the Greek language. For foreign language students (eg Erasmus students) conducted in English

(5) ATTACHED BIBLIOGRAPHY (In Greek)

Προτεινόμενη Βιβλιογραφία : *Α. Καραμάνος. Γενική Γεωργία. Αρχές Φυτικής Παραγωγής στις αροτραίες Καλλιέργειες, Εκδόσεις ΠΑΠΑΖΗΣΗΣ, 2011, ΑΘΗΝΑ, Κωδικός Ευδόξου 5778* Archives of Agronomy and Soil Science Agronomy Journal