

SUSTAINABLE - ORGANIC AGRICULTURE

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_701	SEMESTER	7 th
COURSE TITLE	Sustainable - Organic Agriculture		
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	2		
Tutorials	1		
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>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Specialised general knowledge		
PREREQUISITE COURSES:	Typically, there are no prerequisite courses.		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek. Teaching may be performed in English in case foreign students attend the course.		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes (in English)		
COURSE WEBSITE (URL)			

2. LEARNING OUTCOMES

<p>Learning outcomes <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. 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 introduce students to the principles of Sustainable - Organic Agriculture and to make them able to apply alternative methods of plant cultivation. Upon successful completion of the course, the students will be able to:</p> <ul style="list-style-type: none"> • Be able to understand the principles of sustainable agriculture. • Knowing historical elements and future trends in organic agriculture. • Be informed for the regulatory framework for verification process and labeling of organic products. • Be able to understand affecting parameters of organic agriculture (soil, propagation material, fertilization, pest and weed control, water management, harvest and postharvest processing). • Be able to understand organic product certification processes, focusing on critical points of control per certification process and crop.
<p>General Competences <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>

<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>
<ul style="list-style-type: none"> • Search for, analysis and synthesis of data and information, with the use of the necessary technology • Working independently • Teamwork • Production of free, creative and inductive thinking • Respect for the natural environment • Project planning and management • Working in an international environment • Decision-making 	

3. SYLLABUS

<p>Lectures</p> <ol style="list-style-type: none"> 1. Sustainability as a parameter of agricultural practice, 2. Sustainable agriculture and agro-ecosystem management, 3. National and European Sustainability Strategy 4. Definitions and principles of organic farming, 5. International, Community and national legal framework for organic farming. 6. Historical overview of organic farming, 7. Organic Agriculture and Environmental Parameters. Soil fertility and ways, it influences organic farming 8. Basic principles of organic production: Soil sustainability and ecosystems. Treatment of plant debris. Crop rotation, Cultivation of crops and nutrient management in organic farming. 9. Plant protection and plant protective substances in organic farming, 10. Intercropping summer crops, crop rotation. management of nutrients in organic farming 11. Packaging, exhibition and promotion of organic farming products. 12. Production, processing and handling of organic products. 13. Organic livestock farming <p>Laboratory Exercises</p> <ol style="list-style-type: none"> 1. The influences of environmental factors on biodiversity in agroecosystems 2. Soil management 3. Composting 4. Intercropping, Crop rotation 5. Sowing-Planting in the field and seedbeds 6. Weed ecology and management 7. Educational trip
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4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Lectures, self-tests of students and problem-solving seminars., face to face.	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Power point presentations, i-books, videos, Educational process is supported by the online platform e-class.	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i>		Semester workload

<p>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.</p> <p>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</p>	Lectures (2 contact hours per week x 13 weeks)	26
	Laboratory practice (2 contact hours per week x 7 weeks)	14
	Project, essay writing	20
	Hours for private study of the student and preparation for mid-term or/and final examination – Participation in the examinations	42
	Educational visits to organic farms	10
	Total number of hours for the Course (25 hours of work-load per ECTS credit)	125 hours (total student work-load)
<p>STUDENT PERFORMANCE EVALUATION</p> <p>Description of the evaluation procedure</p> <p>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</p> <p>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</p>	<ul style="list-style-type: none"> • Written final examination of the lesson Minimum probable grade: 5. • All the above are taking place in the Greek language and for the foreign students (e.g. ERASMUS students) in English. • 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. • Theory: Final Exam (60%) written of increasing difficulty, which may include Multiple choice test, Questions of short answer, questions on topic development, problems / exercises based on the theoretical knowledge presented at the courses • Laboratory: Final Exam (40%). The examination in the laboratory part of the course includes questions on the laboratory exercises and on the group and atomic assignments. • The final Course mark is the average of the marks on Theory and Lab. 	

5. ATTACHED BIBLIOGRAPHY

1. Altieri, M. A. (2018). Agroecology: the science of sustainable agriculture. CRC Press
2. Gliessman SR and Rosemeyer M. (2009). *The conversion to sustainable agriculture: principles, processes, and practices*. CRC Press.
3. Σιάρδος, Γ & Κουτσούρης, Α. (2011), Αειφορική Γεωργία & Ανάπτυξη Θεσσαλονίκη, Ζυγός.
4. Σιδηράς, Ν. (2005). Βιολογική Γεωργία και Φυτική Παραγωγή. Αθήνα, ΔΗΩ.
5. Φωτόπουλος, Χ. (2000), Βιολογική γεωργία κόστος, αποδοτικότητα, ανάλυση αγοράς & στρατηγικές marketing. Αθήνα, Σταμούλη.