

AGROBIODIVERSITY AND AGRICULTURAL ECOSYSTEM

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENECE		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	CRS_904	SEMESTER OF STUDIES	9 th
COURSE TITLE	Agrobiodiversity and Agricultural Ecosystem		
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	3	
	Tutorial	1	
	Total	4	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>	Skills development		
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 (English)		
COURSE WEBPAGE (URL)			

2. LEARNING OUTCOMES

<p>Learning outcomes</p> <p><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></p> <p><i>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 course aims at introducing the students to the concepts of agrobiodiversity and the maintenance of plant genetic resources.</p> <p>By completing this course, the students are expected to have achieved the following skills and capabilities.:</p> <ul style="list-style-type: none"> • Understand the concepts of biological diversity, agrobiodiversity and plant genetic resources • Acquire a comprehensive view regarding the threats and the benefit of preserving biodiversity • They will gain comprehensive knowledge regarding the traditional varieties and their impact in modern agriculture and the society • They will be able to get insight in applications for maintaining and preserving agrobiodiversity and the indigenous genetic resources.
<p>General Competences</p> <p><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> <p><i>Search for, analysis and synthesis of data and</i> <i>Project planning and management</i></p>

<i>information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Teamwork</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</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>Others...</i>
<p>Generally, by the end of this course the student will, furthermore, have develop the following general abilities (from the list above):</p> <p>Searching, analysis and synthesis of facts and information, as well as using the necessary technologies</p> <p>Decision making</p> <p>Respect for the natural environment</p> <p>Working independently</p> <p>Promotion of free, creative and inductive thinking</p>	

3. SYLLABUS

<ol style="list-style-type: none"> 1. Biodiversity, definition of biodiversity. 2. Threats to Biodiversity (human activity, climatic change etc.) 3. Protection of Biodiversity, benefits from the preservation of biodiversity 4. Legal framework for the protection of Biodiversity (International conventions and treaties). 5. Agrobiodiversity 6. Threats to agrobiodiversity. Promotion of the benefits of agrobiodiversity. 7. Recording and characterizing agrobiodiversity. 8. Local varieties and traditional cultivars. Genetic erosion 9. Preservation and maintenance of plant genetic resources: <i>ex situ, in situ/on farm</i> 10. Plant genetic resources: their impact on the global feeding issue and the climate change 11. International efforts, organizations and foundations for the preservation of plant genetic resources. 12. Impact of agrobiodiversity in social culture and folk heritage. 13. Plant genetic resources as a repository for wild genes and plant breeding
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4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face to face lectures in the classroom.	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of Information and Communication Technologies (ICTs) (e.g. Microsoft PowerPoint) in teaching. The contents of the course of each chapter are uploaded on the internet, that the students can freely download using a password which is provided to them at the beginning of the course.	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <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> <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>	Activity	Semester workload
	Lectures (3 contact hours per week x 13 weeks)	39
	Tutorial (1 contact hours per week x 13 weeks)	13
	Hours for private study of the student, preparation and attendance mid-term or/and final examinations.	73
	Total number of hours for the Course (25 hours of workload per ECTS credit)	125 hours (total student workload)
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i>	Final mandatory written examination, full length questions and / or multiple-choice questions. Minimum pass grade= 5, scale 0-10.	

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.

All the above are taking place in Greek as well as in English for foreign students (e.g. ERASMUS students) if any.

5. ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

Gaston JK, Spicer IJ. Biodiversity: An Introduction, 2nd Edition, Wiley

Resolving the challenge posed by agrobiodiversity and plant genetic resources - an attempt. K. Hammer. Kassel University Press

Bhargava A and Srivastava S. Participatory Plant Breeding Across Continents. In Participatory Plant Breeding: Concept and Applications. Springer, Singapore.

Hawkes JG, Maxted N and Ford-Lloyd BV. The Ex Situ Conservation of Plant Genetic Resources. Dordrecht: Kluwer Academic Publishers.

Plant Genetic Resources: Horticultural Crops. Alpha Science International, Ltd

- Related academic journals:

Genetic Resources and Crop Evolution

Agriculture

Plant Genetic Resources

APICALTURE

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_905	SEMESTER OF STUDIES	9 th
COURSE TITLE	APICALTURE		
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	3	
	Tutorials	1	
	TOTAL	4	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:	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		
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.</i> Consult Appendix A</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 course aims to introduce students in all aspects of apiculture science, emphasizing in everyday practices in commercial apiaries. Students, with the successful completion of the course will:</p> <ul style="list-style-type: none"> – Have introduced in basic principles of apiculture science and practice. – Be able to establish their own commercial apiary activity. – Provide consulting to farmers. 																	
<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> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td style="width: 50%; border: none;"><i>Project planning and management</i></td> </tr> <tr> <td style="border: none;"><i>Adapting to new situations</i></td> <td style="border: none;"><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td style="border: none;"><i>Decision-making</i></td> <td style="border: none;"><i>Respect for the natural environment</i></td> </tr> <tr> <td style="border: none;"><i>Working independently</i></td> <td style="border: none;"><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></td> </tr> <tr> <td style="border: none;"><i>Team work</i></td> <td style="border: none;"><i>Criticism and self-criticism</i></td> </tr> <tr> <td style="border: none;"><i>Working in an international environment</i></td> <td style="border: none;"><i>Production of free, creative and inductive thinking</i></td> </tr> <tr> <td style="border: none;"><i>Working in an interdisciplinary environment</i></td> <td style="border: none;"><i>.....</i></td> </tr> <tr> <td style="border: none;"><i>Production of new research ideas</i></td> <td style="border: none;"><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>Project planning and management</i>	<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>	<i>Decision-making</i>	<i>Respect for the natural environment</i>	<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>	<i>Team work</i>	<i>Criticism and self-criticism</i>	<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>	<i>Working in an interdisciplinary environment</i>	<i>.....</i>	<i>Production of new research ideas</i>	<i>Others...</i>
<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>																
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>																
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<i>Production of new research ideas</i>	<i>Others...</i>																

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<p><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></p> <p><i>Adapting to new situations</i></p> <p><i>Decision-making</i></p> <p><i>Working independently</i></p> <p><i>Team work</i></p> <p><i>Respect for the natural environment</i></p> <p><i>Criticism and self-criticism</i></p>

3. SYLLABUS

<ol style="list-style-type: none"> 1. Introduction to apiculture. Apiculture in Greece. Professional, commercial and scientific development in Greece. Importance of bees in Agriculture. 2. Bee taxonomy. Bee biology. Native bee species and their characteristics. 3. Bee development (Queen, worker, drone) and societal functionality of bees. 4. Bee anatomy, physiology, nutrition, behavioral characteristics. 5. Bee pollination, honey bee plant list and their cultivation needs. 6. Apiary equipment and management. Queen bee production techniques. 7. Bee based products. 8. Bee diseases, enemies and bee poisoning. 9. Moving Bee Hives Short or Long Distances. 10. Bee genetics and selection choices. 11. Beekeeping law. EU policy on apiculture. 12. Safety and hygiene in apiaries 13. Business plans in apiculture. Annual reporting.
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4. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face lectures and laboratory exercises.	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> • Use of Information and Communication Technologies (ICTs) (e.g. powerpoint) in teaching. • Use of ICTs in student communication (learning support through the e-class platform). 	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <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> <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>	Activity	Semester workload
	Lectures (3 conduct hours per week x 13 weeks)	39
	Tutorial (1 conduct hours per week x 13 weeks)	13
	Assignments	10
	Private study time of the students for the lab preparation and final examination - Participation in the examinations	63
	Total number of hours for the Course (25 hours of workload per ECTS credit)	125 hours (total student workload)
STUDENT PERFORMANCE EVALUATION	Student performance evaluation will be explained to the students at the beginning of the course/beginning of the semester.	

<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>Mandatory final written examination for lectures / theoretical part of the course, comprises 60% of the final mark of the student.</p> <p>Mandatory final written examination for the transferred laboratory skills of the course, comprises 40% of the final mark of the student.</p> <p>Minimum pass mark: 5 (full scale: 0-10)</p> <p>The above mentioned process will be taking place in Greek and for foreign students (eg ERASMUS students) in English.</p>
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5. ATTACHED BIBLIOGRAPHY

<p><i>Suggested bibliography:</i></p> <ol style="list-style-type: none"> 1. Π. Χαριζάνης, Μέλισσα και Μελισσοκομική Τεχνική, ΜΕΛΙΣΣΟΚΟΜΙΚΗ ΕΠΙΘΕΩΡΗΣΗ, 2017. ISBN:13978960857794 2. Clement HENRI (επιμέλεια Ψύχαλου Μαριάννα) «Σύγχρονη Μελισσοκομία». Εκδόσεις Ψύχαλος, 2017. ISBN:9786185049516 3. Π. Χαριζάνης, Εγχειρίδιο Σηροτροφίας, 2007

INTRODUCTION TO ENTREPRENEURSHIP

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_906	SEMESTER OF STUDIES	9 th
COURSE TITLE	INTRODUCTION TO ENTREPRENEURSHIP		
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	3		
Tutorials	1		
TOTAL	4	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:	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		
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 basic concepts of innovation and entrepreneurship. The teaching of the course aims to:</p> <ul style="list-style-type: none"> • Acquisition of advanced knowledge in a field of work or study, which involves a critical understanding of theories and principles • Development of advanced skills and proven craftsmanship/innovation to solve complex and unpredictable problems in a specialized field of work or study • Development of professional skills related to the management of complex techniques or activities or work plans, taking responsibility for decision-making in unpredictable work or study environments. In addition to being able to take responsibility for managing the professional development of individuals and teams. apply the basic analytical techniques of Chemistry • evaluate the results of a chemical analysis • handle instruments
<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> <p><i>Search for, analysis and synthesis of data and</i> <i>Project planning and management</i></p>

<i>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>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>Others...</i>
<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>Respect for the natural environment</i> <i>Criticism and self-criticism</i>	

3. SYLLABUS

- Introduction to Entrepreneurship and Innovation
- Entrepreneurship: The Concept of Business, Types of Businesses, Concept, Types and Models of Entrepreneurship
- Approaches to Entrepreneurship, Internal and External Environment Analysis
- Opportunity Recognition and Entrepreneurial Creativity,
- Agencies and Institutions that Enhance Entrepreneurship
- Innovation: The Concept and Need for Innovation
- Innovation and Competitive Advantage
- Types of Innovation, Sources of Innovation
- Innovation Management
- Entrepreneurship and Innovation
- Development of New Products and Services
- Financing of Business Ventures
- The Business Plan

4. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face lectures and laboratory exercises.	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> • Use of Information and Communication Technologies (ICTs) (e.g. powerpoint) in teaching. • Use of ICTs in student communication (learning support through the e-class platform). 	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <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> <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>	Activity	Semester workload
	Lectures (3 conduct hours per week x 13 weeks)	39
	Tutorial (1 conduct hours per week x 13 weeks)	13
	Assignments	10
	Private study time of the students for the lab preparation and final examination - Participation in the examinations	63
	Course total (25 work load for each ECTS credit)	125 hours (total student workload)

<p style="text-align: center;">STUDENT PERFORMANCE EVALUATION</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>Student performance evaluation will be explained to the students at the beginning of the course/beginning of the semester.</p> <ol style="list-style-type: none"> 1. Mandatory final written examination for lectures / theoretical part of the course, comprises 60% of the final mark of the student. 2. Mandatory final written examination for the transferred laboratory skills of the course, comprises 40% of the final mark of the student. <p>Minimum pass mark: 5 (full scale: 0-10)</p> <ol style="list-style-type: none"> 3. 1. The above mentioned process will be taking place in Greek and for foreign students (eg ERASMUS students) in English.
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5. ATTACHED BIBLIOGRAPHY

<p>- Suggested bibliography:</p> <ul style="list-style-type: none"> • Bessant J. και Tidd J., Καινοτομία και Επιχειρηματικότητα, Κουλουριώτης Δημήτρης (επιμ.), Εκδόσεις Τζιόλα, Αθήνα, 2016. • Καραγιάννης Η. και Μπακούρος Ι., Καινοτομία και Επιχειρηματικότητα, Εκδόσεις Σοφία, Θεσσαλονίκη, 2010 • Βασιλειάδης Λ., Επιχειρηματικότητα και καινοτομία - βασικές έννοιες και σύγχρονες τάσεις, Εκδόσεις Τσότρας, Αθήνα, 2017. <p>- Related academic sources and journals:</p> <ol style="list-style-type: none"> 1. The International Journal of Entrepreneurship and Innovation 2. Strategic Entrepreneurship Journal 3. Journal of Innovation and Entrepreneurship Επικοινωνιών. Αθήνα: Εκδόσεις Κλειδάριθμος.

VIROLOGY

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_907	SEMESTER OF STUDIES	9 th
COURSE TITLE	VIROLOGY		
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		3	
Tutorials		1	
TOTAL		4	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:	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		
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.</i> <i>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>After successful completion of the course, students will understand virology as science and field practice. They will be able to manage interactions between viruses, vectors and plants, locate plant virus reserves in the field, identify in the lab viral infections of plants and provide potential solutions. Furthermore the student will be able to:</p> <p>Know basic principles of virology Know plant viruses characteristics Apply front line techniques for virus detection Manage plant viral diseases in the field based on their epidemiology and appropriate control strategy.</p>								
<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> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td style="width: 50%; border: none;"><i>Project planning and management</i></td> </tr> <tr> <td style="border: none;"><i>Adapting to new situations</i></td> <td style="border: none;"><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td style="border: none;"><i>Decision-making</i></td> <td style="border: none;"><i>Respect for the natural environment</i></td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;"><i>Showing social, professional and ethical responsibility and sensitivity to</i></td> </tr> </table>	<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>	<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>	<i>Decision-making</i>	<i>Respect for the natural environment</i>		<i>Showing social, professional and ethical responsibility and sensitivity to</i>
<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>							
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>							
<i>Decision-making</i>	<i>Respect for the natural environment</i>							
	<i>Showing social, professional and ethical responsibility and sensitivity to</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>gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>Others...</i>
<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>Respect for the natural environment</i> <i>Criticism and self-criticism</i>	

3. SYLLABUS

<p>Introduction in plant virology</p> <p>Basic principles</p> <p>Plant viruses structures, and their genome organization.</p> <p>Plant viruses nomenclature and taxonomy</p> <p>Viral infection of plant hosts and transport among tissues</p> <p>Plant viruses replication mechanisms</p> <p>Plant viruses detection methods (in vitro, electronic microscopy, serological and molecular techniques).</p> <p>Transmission of plant viruses.</p> <p>Plant viruses control strategies</p> <p>Virus free certification in plant propagation.</p> <p>Viroids, phytoplasmas and other close related plant pathogens.</p>
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4. TEACHING and LEARNING METHODS - EVALUATION

<p>DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	Face-to-face lectures and laboratory exercises.	
<p>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<ul style="list-style-type: none"> • Use of Information and Communication Technologies (ICTs) (e.g. powerpoint) in teaching. • Use of ICTs in student communication (learning support through the e-class platform). 	
<p>TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <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>	Activity	Semester workload
	Lectures (3 conduct hours per week x 13 weeks)	39
	Tutorial (1 conduct hours per week x 13 weeks)	13
	Assignments	10
	Private study time of the students for the lab preparation and final examination - Participation in the examinations	63
	Course total (25 work load for each ECTS credit)	125 hours (total student workload)
<p>STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i></p>	<p>Student performance evaluation will be explained to the students at the beginning of the course/beginning of the semester.</p> <p>Mandatory final written examination for lectures / theoretical part of the course, comprises 60% of the final mark of the student.</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>Mandatory final written examination for the transferred laboratory skills of the course, comprises 40% of the final mark of the student.</p> <p>Minimum pass mark: 5 (full scale: 0-10)</p> <p>The above mentioned process will be taking place in Greek and for foreign students (eg ERASMUS students) in English.</p>
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5. ATTACHED BIBLIOGRAPHY

<p>- Suggested bibliography:</p> <ol style="list-style-type: none"> 1. Κατής, ΝΙ. 2000. Ιολογία Φυτών. Εκδόσεις Πήγασος, Θεσσαλονίκη 2. Roger Hull 2013. Plant Virology, 5th Edition, Academic Press
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AGRICULTURAL EXPERIMENTATION

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_908	SEMESTER OF STUDIES	9 th
COURSE TITLE	AGRICULTURAL EXPERIMENTATION		
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	
	Seminars	2	
	Total	4	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>	special background, skills development		
PREREQUISITE COURSES:	Typically, there are no prerequisite courses. Students must have basic knowledge of Statistics.		
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 (English)		
COURSE WEBPAGE (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"> • 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
<p>The course aims at introducing the students to the concepts of Agricultural Experimentation and to experimental design and analysis.</p> <p>By completing this course, the students are expected to have achieved the following skills and capabilities.:</p> <ul style="list-style-type: none"> • Demonstrate an understanding of designing an experiment, collecting, analyzing, and interpreting data. • Being able to design and select the most appropriate methods for performing experiments • Being able to analyze methods and models used in agricultural experimentation. • Demonstrate the ability of analyzing the real data using different models and methods.
<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> <p>Search for, analysis and synthesis of data and information, with the use of the necessary technology Project planning and management Respect for difference and multiculturalism</p>

<i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Teamwork</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</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>Others...</i>
Searching, analysis and synthesis of facts and information, as well as using the necessary technologies Decision making Independent work Working in an interdisciplinary environment Project planning and management Production of new research ideas Promotion of free, creative and inductive thinking	

3. SYLLABUS

<ol style="list-style-type: none"> 1. An introduction to agricultural experimentation. Basic concepts and definitions. 2. The experimental plot. Size and shape of experimental plots and blocks. Heterogeneity of experimental field, examples. 3. Field experiments, greenhouse experiments, laboratory testing. Randomization – Replication - Field testing 4. Analysis of Variance, confidence intervals, Type I and II errors. 5. Single factor designs. Complete randomized design. Design, construction of an experiment, comparing means, Analysis of data extracting results. Examples. 6. Randomized Block Design. Design, construction of an experiment, comparing means, Analysis of data extracting results. Examples. 7. The Latin square design. Design, construction of an experiment, comparing means, Analysis of data extracting results. Examples. 8. Subsampling, anterior and posterior comparisons 9. Factorial designs. Pros and cons of factorial analysis. Test of assumptions. Examples. 10. Correlation analysis 11. Linear Regression Analysis 12. Split plot experiments: Design, construction of an experiment, comparing means, Analysis of data extracting results. Examples. 13. Data transformation.
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4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face to face lectures in the classroom and the field.	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of Information and Communication Technologies (ICTs) (e.g. Microsoft PowerPoint) in teaching. The contents of the course of each chapter are uploaded on the internet, that the students can freely download using a password which is provided to them at the beginning of the course.	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <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> <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>	Activity	Semester workload
	Lectures (2 contact hours per week x 13 weeks)	26
	Seminars (2 contact hours per week x 13 weeks)	26
	Reports - Projects	13
	Hours for private study of the student, preparation and attendance mid-term or/and final examinations.	60
	Total number of hours for the Course	125 hours (total student workload)

	(25 hours of workload per ECTS credit)	
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <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> <i>Specifically, defined evaluation criteria are given, and if and where they are accessible to students.</i>	Final mandatory written examination, full length questions and / or multiple-choice questions, as well as questions based on problems solving. Minimum pass grade= 5, scale 0-10. All the above are taking place in Greek as well as in English for foreign students (e.g. ERASMUS students) if any.	

5. ATTACHED BIBLIOGRAPHY

<p>- <i>Suggested bibliography:</i> Alan G. Clewer and David H. Scarisbrick. PRACTICAL STATISTICS AND EXPERIMENTAL DESIGN FOR PLANT AND CROP SCIENCE. John Wiley & Sons, Ltd, 2001. A. Reza Hoshmand: Experimental Research Design and Analysis. CRC Press 1994 Thomas M. Little, F. Jackson Hills. Agricultural Experimentation: Design and Analysis. Wiley, 1978.</p> <p>- <i>Related academic journals:</i> Annals of Biometry and Biostatistics</p>

PLACEMENT

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_909	SEMESTER OF STUDIES	9 th
COURSE TITLE	PLACEMENT		
FACULTY MEMBER			
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	
Placement		5	
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Skills development		
PREREQUISITE COURSES:	Typically, there are no prerequisite courses		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek.		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBPAGE (URL)			

2. LEARNING OUTCOMES

<p>Learning outcomes</p> <ul style="list-style-type: none"> • 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 		
<p>Placement is an important tool for broadening academic knowledge through frontline job experience, familiarizing troubleshooting problems with science data in real time work environments, boosting professional career and alumni integration to the job market.</p>		
<p>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?</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> Search for, analysis and synthesis of data and information, with the use of the necessary technology Adapting to new situations Decision-making Working independently </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> 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 </td> </tr> </table>	<ul style="list-style-type: none"> Search for, analysis and synthesis of data and information, with the use of the necessary technology Adapting to new situations Decision-making Working independently 	<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> Search for, analysis and synthesis of data and information, with the use of the necessary technology Adapting to new situations Decision-making Working independently 	<ul style="list-style-type: none"> 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 	

<i>Team work</i>	<i>Production of free, creative and inductive thinking</i>
<i>Working in an international environment</i>	<i>.....</i>
<i>Working in an interdisciplinary environment</i>	<i>Others...</i>
<i>Production of new research ideas</i>	<i>.....</i>

<ul style="list-style-type: none"> • Autonomous (Independent) work • Team work • Project planning and management • Respect for the environment • Adaptation to environmental changes under optimum, suboptimum and extreme conditions. • Production of new research ideas • Promotion of free, creative and inductive thinking

3. SYLLABUS

Students' placement is an optional course. One faculty member of Agricultural Department is placement supervisor. This course includes a scientific and professional work. Students have to keep work/tasks colander with their progress for evaluation purposes.

4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face to face.	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of Information and Communication Technologies (ICTs)	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <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> <i>The student's study hours for each learning activity are given as well as the hours of nondirected study according to the principles of the ECTS</i>	Activity	Semester workload
	Placement work	125
	Reports	
	Total number of hours for the Course (25 hours of work-load per ECTS credit)	125 hours (total student work-load)
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <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</i>	Placement evaluation by the academic supervisor takes place on the basis of: <ol style="list-style-type: none"> 1. Student's Work / Task Calendar and student's final progress report. 2. Oral examination of the student for tasks taken place during placement. 3. Employer Report for student's duties and performance. 4. If placement is funded or subsidized by national or European or private authorities, all necessary documentation (financial, administrative etc) shall accompanied student's placement records. 	

*examination of patient, art interpretation, other
Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*

5. ATTACHED BIBLIOGRAPHY

According to placement organization

CERTIFICATION OF AGRICULTURAL PRODUCTION SYSTEMS

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_1002	SEMESTER OF STUDIES	10 th
COURSE TITLE	CERTIFICATION OF AGRICULTURAL PRODUCTION SYSTEMS		
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	3	
	Tutorial	1	
	Total	4	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>	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 (English)		
COURSE WEBPAGE (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.</i></p> <p><i>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>This course aims to train students into product quality and procedure of their certification. Students will obtain knowledge about to Current legislation, certification systems, adequate procedures for product certification and recognition of agricultural products in the national, European, and international market.</p> <p>By the end of this course the student will have developed the following skills:</p> <ul style="list-style-type: none"> Knowing the characteristics of agricultural product certification systems Knowing the management system in accordance with the International Standardization Organization (ISO), Knowing the National standard system (AGRO) for farm management Compose-develop an application dossier for a product certification in respect one of the EU quality schemes for agricultural products (PDO, PGI, TSG).
<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>Teamwork</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>Others...</i>
Searching, analysis and synthesis of facts and information, as well as using the necessary technologies Decision making Respect for the natural environment Working independently Promotion of free, creative and inductive thinking	

3. SYLLABUS

<ol style="list-style-type: none"> 1. History and evolution of agricultural product quality systems 2. Modern aspects of agricultural products quality 3. European policy for agricultural product quality. 4. Documentation, management requirements, application and certification procedures applied for the PDO, PGI and TGS products. 5. Standard certification systems (ISO) 6. AGRO standards (Hazard Analysis) 7. AGRO standards (Integrated Management in Agricultural Production, part I) 8. AGRO standards (Integrated Management in Agricultural Production, part II) 9. AGRO standards (Management system for Organic products) 10. Private quality labels and exporting certificates. 11. Product Safety Data Sheet. 12. Traceability. 13. Labelling and prevailing methodologies for agricultural products origin identification
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4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face to face lectures in the classroom.	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of Information and Communication Technologies (ICTs) (e.g. Microsoft PowerPoint) in teaching. The contents of the course of each chapter are uploaded on the internet, that the students can freely download using a password which is provided to them at the beginning of the course.	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <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> <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>	Activity	Semester workload
	Lectures (3 contact hours per week x 13 weeks)	39
	Tutorial (1 contact hours per week x 13 weeks)	13
	Final examinations	3
	Hours for private study of the student, preparation and attendance mid-term or/and final examinations.	70
	Total number of hours for the Course (25 hours of workload per ECTS credit)	125 hours (total student workload)
STUDENT PERFORMANCE EVALUATION	Written examination after the end of the semester. The evaluation procedure is conducted with short answer questions and/or open-	

<p><i>Description of the evaluation procedure</i> <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> <i>Specifically, defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>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.</p> <p>All the above are taking place in Greek as well as in English for foreign students (e.g. ERASMUS students) if any.</p>
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5. ATTACHED BIBLIOGRAPHY

<ul style="list-style-type: none"> • Πρότυπα Agro (elgo.gr) • REGULATION (EU) No 1151/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 November 2012 on quality schemes for agricultural products and foodstuffs. • Commission Regulation (EC) No 1216/2007 of 18 October 2007 laying down detailed rules for the implementation of Council Regulation (EC) No 509/2006 on agricultural products and foodstuffs as traditional specialities guaranteed • Commission Regulation (EC) No 1898/2006 of 14 December 2006 laying down detailed rules of implementation of Council Regulation (EC) No 510/2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs • Commission Regulation (EC) No 628/2008 of 2 July 2008 amending Regulation (EC) No 1898/2006 laying down detailed rules of implementation of Council Regulation (EC) No 510/2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs

AGRICULTURAL - ENVIRONMENTAL STUDIES AND PROJECT DESIGN

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_1003	SEMESTER OF STUDIES	10 th
COURSE TITLE	AGRICULTURAL - ENVIRONMENTAL STUDIES AND PROJECT DESIGN		
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	3	
	Tutorials	1	
	Total	4	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>	Specialised general knowledge		
PREREQUISITE COURSES:	Typically, there are no prerequisite courses.		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek.		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBPAGE (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.</i></p> <p><i>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 provide students with the necessary knowledge and skills to be able to utilize and manage natural resources with an ecological perspective. The national and community legislation is analyzed and the necessary issues for compose reports relevant to development of agricultural sector.</p>																		
<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> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td style="width: 50%; border: none;"><i>Project planning and management</i></td> </tr> <tr> <td style="border: none;"><i>Adapting to new situations</i></td> <td style="border: none;"><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td style="border: none;"><i>Decision-making</i></td> <td style="border: none;"><i>Respect for the natural environment</i></td> </tr> <tr> <td style="border: none;"><i>Working independently</i></td> <td style="border: none;"><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></td> </tr> <tr> <td style="border: none;"><i>Team work</i></td> <td style="border: none;"><i>Criticism and self-criticism</i></td> </tr> <tr> <td style="border: none;"><i>Working in an international environment</i></td> <td style="border: none;"><i>Production of free, creative and inductive thinking</i></td> </tr> <tr> <td style="border: none;"><i>Working in an interdisciplinary environment</i></td> <td style="border: none;">.....</td> </tr> <tr> <td style="border: none;"><i>Production of new research ideas</i></td> <td style="border: none;"><i>Others...</i></td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">.....</td> </tr> </table> <p><i>Decision making</i></p>	<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>	<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>	<i>Decision-making</i>	<i>Respect for the natural environment</i>	<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>	<i>Team work</i>	<i>Criticism and self-criticism</i>	<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>	<i>Working in an interdisciplinary environment</i>	<i>Production of new research ideas</i>	<i>Others...</i>	
<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>																	
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>																	
<i>Decision-making</i>	<i>Respect for the natural environment</i>																	
<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>																	
<i>Team work</i>	<i>Criticism and self-criticism</i>																	
<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>																	
<i>Working in an interdisciplinary environment</i>																	
<i>Production of new research ideas</i>	<i>Others...</i>																	
																	

Autonomous (Independent) work
Respect for the Environment
Promotion of free, creative and inductive thinking

3. SYLLABUS

1. Introduction to agricultural specifications
2. Stages of agricultural and environmental studies
3. Project design for Agricultural and environmental Studies
4. Methodology of technical and economic execution of projects
5. Environmental impact assessment
6. Impact assessment of abiotic factors to environment
7. Impact assessment to water resources
8. Assessment of impacts to ecosystems
9. Special Ecological Assessment
10. Basic Legislation
11. Contents of Environmental Impact Study
12. Strategic Environmental Impact Study
13. Environmental Impact Assessment: Methodology and Treatment

4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Lectures, self-tests of students and problem-solving seminars.	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of Information and Communication Technologies (ICTs) (e.g. powerpoint) in teaching. The contents of the course of each chapter are uploaded on the internet, in the form of a series of pdf files that the students can freely download using a password which is provided to them at the beginning of the course.	
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 (3 contact hours per week x 13 weeks)	39
	Tutorial (1 contact hours per week x 13 weeks)	13
	Assignments	10
	Hours for private study of the student, preparation and attendance mid-term or/and final examinations.	63
	Total number of hours for the Course (25 hours of work-load per ECTS credit)	125 hours (total student work-load)
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 Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	<p>Student performance evaluation will be explained to the students at the beginning of the course/beginning of the semester.</p> <p>Mandatory final written examination for lectures / theoretical part of the course, comprises 60% of the final mark of the student.</p> <p>Mandatory final written examination for the transferred laboratory skills of the course, comprises 40% of the final mark of the student.</p> <p>Minimum pass mark: 5 (full scale: 0-10)</p> <p>The above mentioned process will be taking place in Greek and for foreign students (eg ERASMUS students) in English.</p>	

5. ATTACHED BIBLIOGRAPHY

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Suggested bibliography:

1. Βαγιωνά, Δ. (2018). Μελέτες Περιβαλλοντικών Επιπτώσεων. Εκδόσεις Δίσιγμα,
2. Τολέρης, Ε. και Κουλίδης, Α. (2014). Προδιαγραφές Περιβαλλοντικών Μελετών, Διεύθυνση Περιβαλλοντικής Αδειοδότησης, Υπουργείο Περιβάλλοντος και Κλιματικής Αλλαγής.
3. Guidelines on the information to be contained in Environmental Impact Statements, CAAS Environmental Services Ltd., 6 Merrion Square, Dublin. Ανακτήθηκε στις 01-01- 2017, <http://www.epa.ie/pubs/advice/ea/guidelines>.
4. Αναστασίου, Θ. (2005). Οικονομοτεχνικές Μελέτες (Μεθοδολογία - Αξιολόγηση -Εφαρμογές). Εκδόσεις Σταμούλης, ISBN: 9602868759.

AGRICULTURAL MACHINERY

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
DEPARTMENT	CROP SCIENCE		
LEVEL OF COURSE	UNDERGRADUATE		
COURSE CODE	CRS_1004	SEMESTER OF STUDIES	10 th
COURSE TITLE	AGRICULTURAL MACHINERY		
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>		TEACHING HOURS PER WEEK	ECTS CREDITS
	Lectures	3	
	Tutorial	1	
	Total	4	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>	Specialized general knowledge		
PREREQUISITE COURSES:	Typically, there are not prerequisite courses.		
TEACHING AND ASSESSMENT LANGUAGE:	Greek. Teaching may be however performed in English in case foreign students attend the course.		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBPAGE (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.</i></p> <p><i>Consult Appendix A</i></p> <p><i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i></p> <ul style="list-style-type: none"> • <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 course aims to provide expertise in the field of mechanization of agriculture and of farm machinery. By the end of this course the students will be able to:</p> <ol style="list-style-type: none"> 1. Identify the farm machines and equipment, their parts and their operation 2. Adjust and utilize farm machinery to meet specific needs of crops 3. Estimate the farm machinery cost of use, estimate fixed and variable costs, as well as calculate the required engine power for new agricultural tractors acquisition 														
<p>General Abilities <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%; border: none;"><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td style="width: 50%; border: none;"><i>Project planning and management</i></td> </tr> <tr> <td style="border: none;"><i>Adapting to new situations</i></td> <td style="border: none;"><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td style="border: none;"><i>Decision-making</i></td> <td style="border: none;"><i>Respect for the natural environment</i></td> </tr> <tr> <td style="border: none;"><i>Working independently</i></td> <td style="border: none;"><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></td> </tr> <tr> <td style="border: none;"><i>Team work</i></td> <td style="border: none;"><i>Criticism and self-criticism</i></td> </tr> <tr> <td style="border: none;"><i>Working in an international environment</i></td> <td style="border: none;"><i>Production of free, creative and inductive thinking</i></td> </tr> <tr> <td style="border: none;"><i>Working in an interdisciplinary environment</i></td> <td style="border: none;"></td> </tr> </table>	<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>	<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>	<i>Decision-making</i>	<i>Respect for the natural environment</i>	<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>	<i>Team work</i>	<i>Criticism and self-criticism</i>	<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>	<i>Working in an interdisciplinary environment</i>	
<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>													
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>													
<i>Decision-making</i>	<i>Respect for the natural environment</i>													
<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>													
<i>Team work</i>	<i>Criticism and self-criticism</i>													
<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>													
<i>Working in an interdisciplinary environment</i>														

<i>Production of new research ideas</i> <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>Production of free, creative and inductive thinking</i> <i>Respect for the natural environment</i>

3. SYLLABUS

<ol style="list-style-type: none"> 1. Agricultural mechanization 2. Agricultural tractor and its uses 3. Internal combustion engines (Part I) 4. Internal combustion engines (Part II) 5. Parts of the agricultural tractor 6. Farm machinery for soil cultivation 7. Sowers and sowing machines 8. Fertilizing machinery 9. Crop protection machinery 10. Harvesters 11. Hay making machinery 12. Power of agricultural tractors and selection of agricultural implements 13. Costs and replacement of farm machinery

4. TEACHING AND LEARNING METHODS - EVALUATION

<p style="text-align: center;">TEACHING METHOD</p> <p style="text-align: center;"><i>Face-to-face, Distance learning, etc.</i></p>	Lectures in class, in the laboratory and in the field (face to face)	
<p style="text-align: center;">USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</p> <p style="text-align: center;"><i>Use of ICT in teaching, laboratory education, communication with students</i></p>	Use of Information and Communication Technologies (ICTs) (e.g. powerpoint) in teaching. Direct communication with the students (face to face and by e-mail), Support of the learning process and uploading of the educational material to the electronic platform (e-class): https://eclass.upatras.gr	
<p style="text-align: center;">TEACHING METHODS</p> <p><i>The manner and methods of teaching are described in detail.</i></p> <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>	Activity	Semester workload
	Lectures (3 contact hours per week x 13 weeks)	39
	Tutorial (1 contact hours per week x 13 weeks)	13
	Mid-term examinations (2 mid-term examinations x 2 contact hours each)	4
	Hours for private study of the student and preparation for mid-term or/and final examination / Final examination	69
	Total number of hours for the Course (25 hours of work-load per ECTS credit)	125 hours (total student work-load)
<p style="text-align: center;">STUDENT PERFORMANCE EVALUATION</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</i></p>	<p>Optionally, two mid-term examinations with the final examination grade to be the mean mark. It is mandatory to obtain pass grade (≥ 5) in each examination.</p> <p>Written examination after the end of the semester. Minimum passing grade: 5.</p> <p>Evaluation of theoretical part (50%)</p> <p>Written examination. It is mandatory to obtain pass grade (≥ 5).</p>	

<p><i>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>Evaluation of the laboratory work (50%)</p> <p>Written examination. It is mandatory to obtain pass grade (≥ 5).</p> <p>All the above are taking place in Greek as well as in English for foreign students (e.g. ERASMUS students) if any.</p>
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5. RECOMMENDED LITERATURE

<ol style="list-style-type: none"> 1. Τσατσαρέλης, Κ., “ Γεωργικοί Ελκυστήρες”, 2η έκδοση, Εκδόσεις Γιαχούδη, Θεσσαλονίκη, 2011 2. Τσατσαρέλης, Κ., “Αρχές Μηχανικής Κατεργασίας του Εδάφους και Σπορά”, Εκδόσεις Γιαχούδη, Θεσσαλονίκη,
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MANAGEMENT OF AGRICULTURAL RESIDUALS AND WASTES

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_1005	SEMESTER OF STUDIES	10 th
COURSE TITLE	MANAGEMENT OF AGRICULTURAL RESIDUALS AND WASTES		
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	3		
Tutorials	1		
TOTAL	4	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>	Specialized general knowledge		
PREREQUISITE COURSES:	There are no prerequisite courses. However, students must have basic knowledge of General and Inorganic Chemistry, Organic Chemistry, Agricultural Physical Chemistry, pomology and Weed science		
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

<p>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</p> <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Upon successful completion of the course, the student will be able to: • Consider residual biomass as a viable source of income • To know basic methods of utilization of residual biomass. • To know products that can be produced from its utilization • To combine knowledge from other fields with the aim of the best and most economical utilization of redundant biomass. • To evaluate the quality and effectiveness of the produced products • Search, gather, analyze and evaluate bibliographic data • To design methods for the small scale utilization of agricultural residues for the production of plant protection products, soil improvers, animal feed, adsorbents, biofuels • To adapt the exploitation methods to the physical and economic geography of the place
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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?

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

Search, analysis and synthesis of data and information, also using the necessary technologies
Adaptation to new situations
Decision making
Autonomous work
Teamwork
Generating new research ideas
Respect for the natural environment
Exercise criticism and self-criticism
Promotion of free, creative and inductive thinking

3. SYLLABUS

1. Introduction. Presentation of the thematic units of the course
2. Extraction methods for the production of vitamin preparations and biofuels
3. Residual biomass: Weeds, wild vegetation, nettle, equisetum
4. Residual biomass: Residues from olive pruning and olive leaves during olive collection
5. Residual biomass of canning and juice making.
6. Residual biomass from pits and skins of fruits and nuts.
7. Production of vitamin herbal preparations for human use: Methods and control.
8. Production of herbal preparations with phytoprotective action: Production and application methods.
9. Production of biofuels using primary material and/or extraction residues
10. Collection of wild olive leaves from the area and extraction (percolation) to produce value-added products
11. Methods of production of aromatic extracts/distillates
12. Methods of production of adsorbents
13. Integrated processes.

4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face to face deliveries.
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> • Use of ICT (power point) in Teaching • Video presentation • Collection of biomass from the surrounding area and presentation of forms of its utilization • Use of ICT in Communication with students (Learning process support through the electronic platform e-class).

TEACHING METHODS	Activity	Semester workload
<p>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.</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 (3 conduct hours per week x 13 weeks)	39
	Tutorials (1 conduct hours per week x 13 weeks)	13
	Study and literature survey	20
	Hours for private study of the student	40
	Mid-term or/and final examinations.	13
	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 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.</p>	<p>The main assessment criteria focus on understanding and correlating the knowledge that students gain from the course with knowledge from other courses. The evaluation is continuous and dynamic. It mainly includes short project work, solving problems or answering open questions. Exams are conducted orally or in writing or a combination of the two, with or without pre-examination of the key topics of the course, with or without progressions and by other inventive methods, depending on the dynamics and the needs of the audience.</p> <p>The above-mentioned process will be taking place in Greek and for foreign students (eg ERASMUS students) in English.</p>

5. ATTACHED BIBLIOGRAPHY

<p><i>Suggested bibliography:</i></p> <ol style="list-style-type: none"> 1. ΔΙΑΧΕΙΡΙΣΗ ΟΡΓΑΝΙΚΩΝ ΑΠΟΒΛΗΤΩΝ ΜΕ ΚΟΜΠΟΣΤΟΠΟΙΗΣΗ ΚΑΙ ΕΠΙΛΟΓΗ ΚΑΤΑΛΛΗΛΩΝ ΔΟΜΙΚΩΝ ΥΛΙΚΩΝ http://iikee.lib.auth.gr/record/297593/files/GRI-2018-21426.pdf 2. Papadaki M. (2020) Waste biomass suitable as feedstock for biofuels production. John Wiley & Sons Ltd. (Chapter 2). <p><i>Related academic journals:</i></p> <ol style="list-style-type: none"> 1. Antioxidants 2. Journal of Natural Medicines (https://www.springer.com/journal/11418) 3. Natural Medicine Journal 4. Biofuels

OENOLOGY

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
DEPARTMENT	CROP SCIENCE		
LEVEL OF COURSE	UNDERGRADUATE		
COURSE CODE	CRS_1006	SEMESTER OF STUDIES	10 th
COURSE TITLE	OENOLOGY		
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>		TEACHING HOURS PER WEEK	ECTS CREDITS
	Lectures	3	
	Tutorial	1	
	Total	4	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, skills development		
PREREQUISITE COURSES:	Typically, there are not prerequisite courses.		
TEACHING AND ASSESSMENT LANGUAGE:	Greek. teaching may be however performed in English in case foreign students attend the course.		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBPAGE (URL)			

2. LEARNING OUTCOMES

<p>Learning outcomes</p> <p><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></p> <p><i>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>This course aims to train students on quality characteristics and properties of main grape varieties for wine production. To deal with the chemical composition of grapes: Sugars. Organic acids. Phenolic compounds. Volatile compounds. Alcoholic degree. Nutritional value. To organize programs offering certified viticultural products and to direct groups of producers.</p>																
<p>General Abilities</p> <p><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%; border: none;"><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td style="width: 50%; border: none;"><i>Project planning and management</i></td> </tr> <tr> <td style="border: none;"><i>Adapting to new situations</i></td> <td style="border: none;"><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td style="border: none;"><i>Decision-making</i></td> <td style="border: none;"><i>Respect for the natural environment</i></td> </tr> <tr> <td style="border: none;"><i>Working independently</i></td> <td style="border: none;"><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></td> </tr> <tr> <td style="border: none;"><i>Team work</i></td> <td style="border: none;"><i>Criticism and self-criticism</i></td> </tr> <tr> <td style="border: none;"><i>Working in an international environment</i></td> <td style="border: none;"><i>Production of free, creative and inductive thinking</i></td> </tr> <tr> <td style="border: none;"><i>Working in an interdisciplinary environment</i></td> <td></td> </tr> <tr> <td style="border: none;"><i>Production of new research ideas</i></td> <td></td> </tr> </table>	<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>	<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>	<i>Decision-making</i>	<i>Respect for the natural environment</i>	<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>	<i>Team work</i>	<i>Criticism and self-criticism</i>	<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>	<i>Working in an interdisciplinary environment</i>		<i>Production of new research ideas</i>	
<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>															
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>															
<i>Decision-making</i>	<i>Respect for the natural environment</i>															
<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>															
<i>Team work</i>	<i>Criticism and self-criticism</i>															
<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>															
<i>Working in an interdisciplinary environment</i>																
<i>Production of new research ideas</i>																
<p><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></p>																

Adapting to new situations
 Decision-making
 Working independently
 Production of free, creative and inductive thinking
 Respect for the natural environment

3. SYLLABUS

1. Quality characteristics and properties of wine, table and raisin varieties
2. Wine production: legislation, global wine geographical distribution.
3. Varieties characteristics and cultivation practices of table grapes.
4. Grape harvest, postharvest technology
5. Production and quality of raisin
6. Oenological Treatments and Practices: grape harvest, crushing, stem removing, draining and pressing.
7. Vinification, pasteurization, filtration and wine bottling. Wine preservation technology
8. Winemaking yeast species.
9. Alcoholic fermentation
10. Common winemaking problems
11. Wine tasting.
12. Vinegar production.
13. Alcoholic beverages and Spirits

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHOD <i>Face-to-face, Distance learning, etc.</i>	Lectures in the class and in the laboratory (face to face)	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of Information and Communication Technologies (ICTs) (e.g. PowerPoint) in teaching. Direct communication with the students (face to face and by e-mail), Support of the learning process and uploading of the educational material to the electronic platform (e-class): https://eclass.upatras.gr	
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 (3 conduct hours per week x 13 weeks)	39
	Tutorial (1 conduct hours per week x 12 weeks)	12
	Mid term examinations	4
	Hours for private study of the student and preparation for mid-term or/and final examination / Final examination	69
	Total number of hours for the Course (25 hours of work-load per ECTS credit)	125 hours (total student work-load)
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>	<ol style="list-style-type: none"> 1. Two mid-term examinations with the final examination grade to be the mean mark. It is mandatory to obtain pass grade (≥ 5) in each examination. 2. Written examination after the end of the semester. Minimum passing grade: 5. <p>Evaluation of theoretical part (60%) Written examination. It is mandatory to obtain pass grade (≥ 5).</p> <p>Evaluation of the mid term exams (40%) Written examination. It is mandatory to obtain pass grade (≥ 5).</p>	

Specifically-defined evaluation criteria are given, and if and where they are accessible to students.

5. ATTACHED BIBLIOGRAPHY

Suggested bibliography:

1. A. Κουτίνας, Μ. Κανελλάκη. 2007. «Χημεία Τροφίμων», Εκδόσεις Τζιόλα.
2. Τσακίρης, 2006. Ελληνική Οινογνωσία, Εκδ. Ψύχαλος, Αθήνα.
3. P. Ribéreau-Gayon, D. Dubourdieu, B. Donèche, A. Lonvaud 2006. Handbook of Enology, Vol. 1: The Microbiology of Wine and Vinifications, Wiley, 2nd edition.

Related academic journals:

Australian Journal of Grape and Wine research
Vitis Journal of the Science of Food and Agricu
American Journal of Enology and Viticulture
Australian Journal of Grape and Wine Research

AGRICULTURAL POLICY

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_1007	SEMESTER OF STUDIES	10 th
COURSE TITLE	AGRICULTURAL POLICY		
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	3	
	Tutorial	1	
	Total	4	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>	Special background, specialised general knowledge,		
PREREQUISITE COURSES:	Typically, there are no prerequisite courses.		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS			
COURSE WEBPAGE (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.</i></p> <p><i>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 agricultural policy course is to provide students will specific knowledge related to creation of the Treaty of Rome, European Union, and CAP (common policy in agricultural areas across Europe).</p>												
<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> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td style="width: 50%; border: none;"><i>Project planning and management</i></td> </tr> <tr> <td style="border: none;"><i>Adapting to new situations</i></td> <td style="border: none;"><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td style="border: none;"><i>Decision-making</i></td> <td style="border: none;"><i>Respect for the natural environment</i></td> </tr> <tr> <td style="border: none;"><i>Working independently</i></td> <td style="border: none;"><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></td> </tr> <tr> <td style="border: none;"><i>Teamwork</i></td> <td style="border: none;"><i>Criticism and self-criticism</i></td> </tr> <tr> <td style="border: none;"><i>Working in an international environment</i></td> <td style="border: none;"><i>Production of free, creative and inductive thinking</i></td> </tr> </table>	<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>	<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>	<i>Decision-making</i>	<i>Respect for the natural environment</i>	<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>	<i>Teamwork</i>	<i>Criticism and self-criticism</i>	<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>
<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>											
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>											
<i>Decision-making</i>	<i>Respect for the natural environment</i>											
<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>											
<i>Teamwork</i>	<i>Criticism and self-criticism</i>											
<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>											

<i>Working in an interdisciplinary environment</i>
<i>Production of new research ideas</i>	<i>Others...</i>

Searching, analysis and synthesis of facts and information, as well as using the necessary technologies
Decision making
Respect for the natural environment
Working independently
Promotion of free, creative and inductive thinking

3. SYLLABUS

<p>14. Organisational and structural evolution of European Union (former European Economic Community). 15. Differential capital accumulation in agriculture and choice reasoning of guaranteed agricultural prices as «Common Agricultural Policy», the only common hypernational policy for member states since European Economic Community establishment. 16. Agricultural models and Classification of Agricultural Policies. 17. Common Agricultural Policy (CAP) and Rome Treaty. 18. Financing the CAP . 19. CAP's instruments and reforms. 20. CAP's pillar 1 — I- Common organisation of agricultural markets (CMO) . 21. CAP's pillar 1 — II Direct payments to farmers . 22. CAP's pillar 2: Policy and agricultural development. 23. WTO agreement on agriculture. 24. New, international and global environment after joining WTO (former G.A.T.T.) 25. Doha Development Round for agriculture. 26. CAP after 2020 year.</p>
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4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face to face lectures in the classroom.	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of Information and Communication Technologies (ICTs) (e.g. Microsoft PowerPoint) in teaching. The contents of the course of each chapter are uploaded on the internet, that the students can freely download using a password which is provided to them at the beginning of the course.	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <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> <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>	Activity	Semester workload
	Lectures (3 contact hours per week x 13 weeks)	39
	Tutorial (1 contact hours per week x 13 weeks)	13
	Final examinations	3
	Hours for private study of the student, preparation and attendance mid-term or/and final examinations.	70
	Total number of hours for the Course (25 hours of workload per ECTS credit)	125 hours (total student workload)
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work,</i>	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.	

<p><i>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>All the above are taking place in Greek as well as in English for foreign students (e.g. ERASMUS students) if any.</p>
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5. ATTACHED BIBLIOGRAPHY

Λιανός Θ., Δαμιανός Δ., Μέργος Γ., Ντεμούσης Μ., Κατρανίδης Σ. 2016. Αγροτική Οικονομική. Εκδότης ΕΥΓΕΝΙΑ ΑΣΤ. ΜΠΕΝΟΥ.

WEED SCIENCE

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_1008	SEMESTER	10 th
COURSE TITLE	WEED SCIENCE		
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	3		
Tutorial	1		
TOTAL	4	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.</i> <i>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 basic issues of biology of weeds and to make them understand the various methods of weed control. Also, the aim of the course is to let them know the uses and properties of herbicides. After graduating from the course, students will be able to:</p> <ul style="list-style-type: none"> • Recognize the main weeds at all different growth stages • Know the biology of weeds. • Know the management of weeds in various plant growing systems using cultivation media. • Know the interactions of weeds with crops (Competition / Allelopathy). • Know the interactions between herbicides, plants, soil and the environment. • Know the ways of proper application of herbicides
<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>
Search for, analysis and synthesis of data and information, with the use of the necessary technologies Respect for the natural environment Decision-making Working independently Production of free, creative and inductive thinking	

3. SYLLABUS

<ol style="list-style-type: none"> 1. Weed biology (weed classification, weed reproduction, seed viability, lethargy, seed spraying, dispersal). 2. Weeds in Greece 3. Weed - Growing Plant Competition 4. Treatment methods and weed management systems (Preventive measures, Mechanical method, Cultivation measures) 5. Methods of treatment and weed management systems (Physical Method, Biological Method, Chemical Method) 6. Integrated weed management. 7. Interaction of weeds with crops (Competition / Alleopathy). 8. Herbicides: penetration and movement of herbicides in plants, selectivity 9. Herbicides: classification, mechanisms of action, formulation and application of herbicides. 10. Herbicides and soil: herbicides removal processes in soil 11. Behavior of herbicides in the plant 12. Weed resistance in herbicides 13. Ways of proper application of herbicides.

4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face (Lectures in the class, lab and field exercises)	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Power point presentations, e-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> <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> <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>	Semester workload	
	Lectures (3 contact hours per week x 13 weeks)	39
	Tutorial (1 contact hours per week x 13 weeks)	13
	Written assignment	10
	Hours for private study of the student and preparation for mid-term or/and final examination – Participation in the examinations	63

	Total number of hours for the Course (25 hours of work-load per ECTS credit)	125 hours (total student work-load)	
<p align="center">STUDENT PERFORMANCE EVALUATION</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>v. 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>vi. Laboratory: Final Exam (40%). The examination in the laboratory part of the course includes questions of short answer, questions on topic development, recognition of weed species and preparation of an herbarium.</p> <p>The final Course mark is the average of the marks on Theory and Lab.</p>		

5. ATTACHED BIBLIOGRAPHY

- Naylor, R. E. (Ed.). (2008). *Weed management handbook*. John Wiley & Sons.
- Ελευθεροχωρινός Η., Ζιζανιολογία, Εκδόσεις Αγροτύπος Α.Ε., 4η έκδοση/2014. 2.
- Λόλας Π., Ζιζανιολογία, Ζιζάνια-Ζιζανιοκτόνα, Τύχη και Συμπεριφορά στο Περιβάλλον. Εκδόσεις Σύγχρονη Παιδεία, 2 η έκδοση /2007.

PLACEMENT

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_1009	SEMESTER OF STUDIES	10 TH
COURSE TITLE	PLACEMENT		
FACULTY MEMBER			
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	
Placement		5	
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Skills development		
PREREQUISITE COURSES:	Typically, there are no prerequisite courses		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek.		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBPAGE (URL)			

2. LEARNING OUTCOMES

<p>Learning outcomes</p> <ul style="list-style-type: none"> • 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 		
<p>Placement is an important tool for broadening academic knowledge through frontline job experience, familiarizing troubleshooting problems with science data in real time work environments, boosting professional career and alumni integration to the job market.</p>		
<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> <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> </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> </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>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>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>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>Team work</i>	<i>Production of free, creative and inductive thinking</i>
<i>Working in an international environment</i>	<i>.....</i>
<i>Working in an interdisciplinary environment</i>	<i>Others...</i>
<i>Production of new research ideas</i>	<i>.....</i>

<ul style="list-style-type: none"> • Autonomous (Independent) work • Team work • Project planning and management • Respect for the environment • Adaptation to environmental changes under optimum, suboptimum and extreme conditions. • Production of new research ideas • Promotion of free, creative and inductive thinking

3. SYLLABUS

Students' placement is an optional course. One faculty member of Agricultural Department is placement supervisor. This course includes a scientific and professional work. Students have to keep work/tasks colander with their progress for evaluation purposes.

4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face to face.	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of Information and Communication Technologies (ICTs)	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <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> <i>The student's study hours for each learning activity are given as well as the hours of nondirected study according to the principles of the ECTS</i>	Activity	Semester workload
	Placement work	
	Reports	125
	Total number of hours for the Course (25 hours of work-load per ECTS credit)	125 hours (total student work-load)
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <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</i>	Placement evaluation by the academic supervisor takes place on the basis of: <ol style="list-style-type: none"> 5. Student's Work / Task Calendar and student's final progress report. 6. Oral examination of the student for tasks taken place during placement. 7. Employer Report for student's duties and performance. 8. If placement is funded or subsidized by national or European or private authorities, all necessary documentation (financial, administrative etc) shall accompanied student's placement records. 	

*examination of patient, art interpretation, other
Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*

5. ATTACHED BIBLIOGRAPHY

According to placement organization