

APICULTURE

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_905	SEMESTER OF STUDIES	9 th
COURSE TITLE	Apiculture		
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 border="0"> <tr> <td><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td><i>Project planning and management</i></td> </tr> <tr> <td><i>Adapting to new situations</i></td> <td><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td><i>Decision-making</i></td> <td><i>Respect for the natural environment</i></td> </tr> <tr> <td><i>Working independently</i></td> <td><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></td> </tr> <tr> <td><i>Team work</i></td> <td><i>Criticism and self-criticism</i></td> </tr> <tr> <td><i>Working in an international environment</i></td> <td><i>Production of free, creative and inductive thinking</i></td> </tr> <tr> <td><i>Working in an interdisciplinary environment</i></td> <td><i>.....</i></td> </tr> <tr> <td><i>Production of new research ideas</i></td> <td><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>
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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
