

COURSE OUTLINE

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	AGRICULTURE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	AGR_104	SEMESTER	1 st
COURSE TITLE	INTRODUCTION TO COMPUTER 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	2		
seminars	1		
laboratory exercises	2		
TOTAL	5	5	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	General background, special background		
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

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

The aim of the course is to provide students with the basic principles of Computer Science. Specifically, with the successful completion of the course, the students a) will have understood the computer as a system b) will have understood the concepts of programming algorithms and programming languages c) will be familiar with office suite software and computer network communications.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology

Adapting to new situations

Decision-making

Working independently

Team work

Working in an international environment

Working in an interdisciplinary environment

Production of new research ideas

Project planning and management

Respect for difference and multiculturalism

Respect for the natural environment

Showing social, professional and ethical responsibility and sensitivity to gender issues

Criticism and self-criticism

Production of free, creative and inductive thinking

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Others...

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

- Ability to demonstrate knowledge and understanding of key data, concepts, theories and applications related to Introduction of Computer Science.
- Ability to apply this knowledge and to understand solutions of problems of non-familiar nature.
- Ability to adopt and apply methodologies to solve non-familiar problems.

- Study skills needed for continuing professional development.
 - Ability to interact with others in natural or interdisciplinary problems.
- Generally, by the end of this course the student will, furthermore, have developed the following general abilities (from the list above):
- Search for, analysis and synthesis of data and information, with the use of the necessary technologies
- Adapting to new situations
- Decision-making
- Working independently
- Criticism and self-criticism
- Teamwork
- Production of free, creative and inductive thinking
- Respect for the natural environment

3. SYLLABUS

Theory

1. Basic computer concepts and general description of information systems (Memory, CPU, input / output devices),
 2. Computational machines.
 3. Coding information and numerical systems
 4. Saving and manipulating data on a computer system - databases
 5. Familiarization with office suite software: document processing
 6. Familiarization with office suite software: spreadsheets
 7. Familiarization with office suite software: presentations
 8. The concept of programs and algorithms
 9. Communications-Computer Networks: Internet Technology, Internet Services, Multimedia
- Internet Applications
10. Introduction to programming languages: syntax of language - variables - mathematical operations - manipulation of strings
 11. Advanced functionalities of programming languages: matrix processing, sub-routines/functions, input/output in files, code debugging
 12. Examples of programming for data management
 13. Communication and networking - Internet uses

Laboratory Exercises

- Presentation and learning of the operating system of windows,
- Learning programs for navigation,
- Search and exchange of messages on the Internet,
- Learning word processing applications, excel spreadsheets and powerpoint programs.
- Use of programming tools.

4 TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face (Lectures in the class, lab exercises)	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Power point presentations, i-books, videos, Educational process is supported by the online platform e-class.	
TEACHING METHODS <i>The manner and methods of teaching are described in detail. 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</i>	Semester workload	
	Lectures (2 contact hours per week x 13 weeks)	26
	Laboratory exercises (2 contact hours per week x 5 weeks)	10
	Seminars (1 contact hour	13

<i>activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	per week x 13 weeks)	
	Hours for private study of the student and preparation for mid-term or/and final examination – Participation in the examinations	76
	Course total	125 hours
<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. The examination in the laboratory part of the course includes short answer questions /or multiple-choice questionnaires and/or oral examination, as well as questions based on laboratory exercises.</p> <p>i. All the above are taking place in the Greek language and for the foreign students (e.g. ERASMUS students) in English.</p> <p>i. 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>γ. Theory: Final Exam (50%). Final Exam, written or oral, 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>γ. Laboratory: Final Exam on laboratory syllabus (50%).</p> <p>The final Course mark is the average of the marks on Theory and Lab.</p>	

5. ATTACHED BIBLIOGRAPHY

- Beekman G and B Beekman, (2015). Εισαγωγή στην Πληροφορική. Εκδόσεις Γκιούρδας, Αθήνα.
- Evans A, Martin K, and Poatsy MA, (2014). Εισαγωγή στην Πληροφορική – Θεωρία και Πράξη. Εκδόσεις Κριτική. ISBN: 978-960-218-931-3
- Norton P, (2012), Εισαγωγή στους υπολογιστές, Εκδόσεις Τζιόλα, Θεσσαλονίκη
- Γαρμπής Α, & Φωτιάδης ΔΑ, (2015). Εισαγωγή στους υπολογιστές και την πληροφορική. Αθήνα: Πανεπιστημιακές Εκδόσεις Αράκυνθος.
- Σιδερίδης, Α, (1998), Εισαγωγή στην επιστήμη των υπολογιστών, ISBN 960-85647-1-4