

INSTITUTION	NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS					
SCHOOL	SCHOOL OF SCIENCE					
DEPARTMENT	INFORMATICS AND TELECOMMUNICATIONS					
COURSE LEVEL	UNDERGRADUATE					
COURSE TITLE	Introduction to Computer Science and Telecommunications					
COURSE CODE	ΓΠ07	SEMESTER	1	ECTS	2	
TEACHING HOURS per week	THEORY	2	SEMINAR.		LAB.	
COURSE TYPE	GENERAL EDUCATION (GE)					
	K	E1	E2	E3	E4	E5
	<i>Συμπληρώστε τον πίνακα όπως στο πρόγραμμα σπουδών: Κατεύθυνση (A, B) / Υποχρεωτικό Ειδίκευσης (Υ) / Βασικό Ειδίκευσης (B) / Επιλογής Ειδίκευσης (E)</i>					
URL	https://eclass.uoa.gr/courses/D253/					
PREREQUISITES	-					
TEACHING AND EXAMINATIONS LANGUAGE	GREEK					
THE COURSE IS OFFERED TO ERASMUS STUDENTS	NO					

COURSE CONTENT

The course objective is to enable first year students to become accustomed with basic concepts and themes of the science of Information Technology and Telecommunications such as the Turing Model and the von Neumann Model, Data Storage and Management, Theory and Calculation Models, Operating Systems, Networking and Internet, Software Engineering and Security.

STUDENT LEARNING OBJECTIVES

Upon successful completion of the course the student will be able to:

- Describe the Turing and Von Neumann models
- Distinguish between computational concepts, complexity and computational complexity
- Convert number representations between different arithmetic systems and perform related operations
- Name the main parts of CPU and describe their function
- Distinguish between hard drive, main memory and other storage units
- Name the basic categories of software and identify their differences
- List the components of an operating system and describe their operation

- List network categories and identify devices to connect to a network
- Describe the phases of the software life cycle
- Give examples of data security

TEACHING AND LEARNING METHODS - ASSESSMENT											
TEACHING METHOD	In Class (Face to Face)										
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	<p>Exploitation and Use of the Learner Centered Learning (LcL) Learning Environment https://lcl.di.uoa.gr/ through the development of activities related to the content of the course. Assignment / Submission / Evaluation of activities through the LcL environment.</p> <p>Support of the learning process through the e-class platform. Specifically: Course description, Material provision, Announcements, Messages, Discussion about course concepts and LcL activities and Provision of Feedback. E-mail communication.</p>										
<p>TEACHING ORGANIZATION</p> <p><i>Describe in detail the way and methods of teaching:</i> Enhanced Lectures, Online Lectures, Seminars, Tutorial, Laboratory, Laboratory Exercise, Study & analysis of literature, Practice (Positioning), Interactive teaching, Developing a project, Individual / group work Telework (reference to tools) etc.</p> <p><i>Details of the student's study hours for each learning activity and hours of non-guided study are shown to ensure that the total workload at the semester corresponds to the ECTS</i></p>	<p>The theoretical part of the course takes place in a classroom using various tools such as slides and videos and other teaching techniques in order to motivate student participation through brainstorming, questions and answers, discussions and various activities. Optional activities in the online learning environment LcL are also included. These are assigned alongside the theoretical part of the course. The engagement of students in the LcL activities and the feedback provided by it contribute to the learning and consolidation of the subject matter by students, which is also the main purpose of LcL's inclusion in the teaching of the course.</p> <table border="1"> <thead> <tr> <th>Activity</th> <th>Student Workload (hours)</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>26</td> </tr> <tr> <td>OPTIONAL Activities in LcL</td> <td>(25)</td> </tr> <tr> <td>Preparation for the Exams</td> <td>24</td> </tr> <tr> <td>Total Course Work</td> <td>50 (+25)</td> </tr> </tbody> </table>	Activity	Student Workload (hours)	Lectures	26	OPTIONAL Activities in LcL	(25)	Preparation for the Exams	24	Total Course Work	50 (+25)
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ASSESSMENT OF STUDENTS

Description of the assessment process

Assessment Methods, Formative or Concluding, Multiple Choice Test, Quick Response Questions, Test Development Questions, Problem Solving, Written Work, Report / Report, Oral Examination, Public Presentation, Laboratory Work, Other / Other

Fully defined evaluation criteria are mentioned and if and where they are accessible to students.

Students are examined through a final written examination and through performing optional activities in the adaptive learning environment LcL. Optional LcL activities give a bonus of up to 2 units. For example, if the grade in the written exams is 7 units and the student has completed all of the assigned LcL activities, the final grade is $7 + 2 = 9$.

Assessment Methods	Number	Percentage
Written Exams	1	100%
Bonus for performing optional activities in LcL	10	Max Bonus 20%

LITERATURE AND STUDY MATERIAL / READING LIST

Study Material:

1. «Computer Science – An Overview» (J. Glenn Brookshear, 10th Edition, Εκδόσεις Κλειδάριθμος)
2. «Foundations of Computer Science» (Behrouz A. Forouzan, Cengage Learning, 2014)

Reading List

Course Notes on e-class