INSTITUTION	NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS					
SCHOOL	SCHOOL OF SCIENCE					
DEPARTMENT	INFORMATICS AND TELECOMMUNICATIONS					
COURSE LEVEL	GRADUATE					
COURSE TITLE	**Introduction to programming for language technology I**					
COURSE CODE	**C13**	**Semester**	1	**ECTS**	6	
TEACHING HOURS per week	**THEORY**	1	**SEMINAR.**		**LABORATORY**	2
URL	https://eclass.uoa.gr/courses/DI518/					

COURSE CONTENT

This is an introductory course to basic computer programming concepts to be applied in Language Technology applications using Python. Students will be introduced to the basic concepts of Python and become familiar with elementary programming concepts such as operators, data types, data structures, control structures, methods, error handling etc. Emphasis will be given to problem solving, and structured programming using appropriate lab exercises inspired from language technology concepts.

STUDENT LEARNING OBJECTIVES

Teaching-Learning Goals-Expected Learning Outcomes
Upon successful completion of the course the student will be able to:

- Define basic computer programming concepts.
- Design, implement, test and debug a program written in Python.
- Choose appropriate conditional, iteration constructs and functions for a given programming task.
- Analyze and explain the behavior of simple programs involving the fundamental programming constructs.
- Demonstrate the correct use of data structures depending on the task at hand.
- Analyze, design and code simple Python programming applications in Language Engineering.

TEACHING AND LEARNING METHODS - ASSESSMENT

TEACHING METHOD	In e-Class (Face to Face if conditions allow it)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Learning process supported by the e-class platform (Announcements, Task assignments, Student groups) Email communication Live transmission of lectures Ability to track recorded lectures Utilization of educational environments: o https://www.jetbrains.com/help/education/jetbrains-academy.html?section=Python#978ca o Python official website: www.python.org, o Python Basic Tutorial: www.tutorialspoint.com, o Interactive Python Tutorial: https://www.learnpython.org/.

	• Utilization of Specialized Software: PyCharm (EDU) IDE.
TEACHING ORGANIZATION *Describe in detail the way and methods of teaching:* *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.* *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*	

Activity	Student Workload (hours)
Lectures	13
Tutorial	0
Laboratory	26
Teamwork in a case study	0
Small individual exercises	60
Independent Study	51
Total Course (25 hours of workload per unit of credit)	**150**

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.*	Describe explicitly methods, evaluation tools and provided feedback. The table below is supplemented accordingly.

Assessment methods	Number	Percentage
Written examination	1	60%
Exercises	4	30%
Attendance & Participation	1	10%

LITERATURE AND STUDY MATERIALS / READING LIST

- "Think Python, How to Think Like a Computer Scientist", By Allen B. Downey, Publisher: O'Reilly Media, Released: August 2012, Pages: 300.
- "Learning Python" by Mark Lutz.
- "Natural Language Processing with Python, Analyzing Text with the Natural Language Toolkit", By Steven Bird, Ewan Klein, Edward Loper, Publisher: O'Reilly Media, Released: June 2009, Pages: 504. Free sampler.
- O'Reilly School of Technology > Online Course > Python 1: Beginning Python.
- List of reference books: https://wiki.python.org/moin/ReferenceBooks