INSTITUTION	NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS					
SCHOOL	SCHOOL OF SCIENCE					
DEPARTMENT	INFORMATICS AND TELECOMMUNICATIONS					
COURSE LEVEL	UNDERGRADUATE					
COURSE TITLE	**Object-Oriented Programming**					
COURSE CODE	K10		Semester	3	ECTS	8
TEACHING HOURS per week	THEORY	3	SEMINAR.	1	LABORATORY	2
COURSE TYPE	**Select one of the following and delete the rest** Compulsory (YM)					
URL	https://eclass.uoa.gr/courses/D14/					
EXPECTED PRIOR KNOWLEDGE/ PREREQUISITES AND PREPARATION:	Recommended K04-Introduction to Programming					
TEACHING AND EXAMINATIONS LANGUAGE:	GREEK					
THE COURSE IS OFFERED TO ERASMUS STUDENTS	NO					

COURSE CONTENT
Introduction to object oriented programming concepts. The C++ programming language: basic language constructs, namespaces, overloading, objects and classes, inheritance and composition, templates, abstract classes, exception handling, introduction to the standard library. Introduction to the STL and generic programming. Quick introduction to Java. Overview other object oriented programming languages.

STUDENT LEARNING OBJECTIVES

Expected Learning Outcomes

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

- Program correctly within the object oriented paradigm
- Use correctly the object oriented C++ language constructs
- Use correctly the object oriented Java language constructs
- Explain the functionality of any C++ program
- Explain the functionality of any Java program
- Use any other object oriented programming language

TEACHING AND LEARNING METHODS - ASSESSMENT	
TEACHING METHOD	In Class (Face to Face)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Learning process supported by web site page where all course material is uploaded as well as the course of the lectures Discussion forum , Announcements, Task assignments Email communication Live transmission of lectures Laboratory work
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*	During the lectures, students are divided into two groups. Slides are used as well as program code which is explained and executed to illustrate the theory. For the lab classes, students are divided into six groups and are urged to write their own code as an initial stage to the development of the code for the assignments. Any time during the semester, students can express any questions or views about the theory, the lab work or the assignments into the course's discussion forum.

Activity	Student Workload *(hours)*
Lectures + Tutorials	52
Laboratory	20
Assignments / Independent Study	128
Total Course	*200*

COURSE SYLLABUS

DEPARTMENT OF
INFORMATICS &
TELECOMMUNICATIONS

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Εθνικόν και Καποδιστριακόν
Πανεπιστήμιον Αθηνών
ΙΔΡΥΘΕΝ ΤΟ 1837

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.

The requirements of the course consist of a written exam plus a sequence of practical work assignments. These are exercises of C++ and Java programs and a final project in C++ and are also examined orally.

Assessment methods	Number	Percentage
Written examination	1	70%
Exercises	4	20%
Project	1	10%

LITERATURE AND STUDY MATERIALS / READING LIST

- I. Karali, "Object Oriented Programming: Lecture Notes", 2010
- I. Karali, "The Java Programming Language: Lecture Notes", 2014
- Bruce Eckel, "Thinking in C++ (Volume 1)", 2nd Edition (Greek Edition, 2009)
- Bjarne Stroustrup, "The C++ Programming Language", 4th Edition (Greek Edition, 2014)
- Bjarne Stroustrup, "Programming: Principles and Practice Using C++", 2nd Edition (Greek Edition, 2009)