a) General			
School	ENGINEERING		
Academic unit	MECHANICAL ENGINEERING		
Level of studies	Undergraduate		
Course code	MM001Y04	*Semester*	1
Course title	**Computer Programming**		

Independent teaching activities	Weekly teaching hours	ECTS
Lectures	5	5.5
Laboratory exercises		

Course type	General background
Course category	Compulsory
Prerequisite courses	-
Language of instruction and examinations	Greek
Is the course offered to Erasmus students	No
Course website (url)	https://moodle.uniwa.gr/course/view.php?id=1278

b) Learning outcomes and general competences

b1. Learning outcomes

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

- handle the integrated application development environment
- create a graphical interface for the purpose of entering information
- distinguish the information that needs to be encoded in the context of a problem and select the appropriate data types for its representation
- to formulate ways to solve simple algorithmic problems
- use the built-in classes, functions and procedures from the programming language
- use debugging tools to detect and repair bugs in a program's source code
- work alone or work with fellow students or engineers on software application development

b2. General competences

- Search for, analysis and synthesis of data and information with the use of the necessary technology
- Working independently
- Team work

c) Syllabus

Introduction to Programming and Informatics, The key elements of a software program and application development environment, Data types, variables, operators and expressions, Flow control commands, Looping commands, Tables (one-dimensional and multidimensional tables), sorting and searching for values, Functions and procedures , Calling a function with value and reference, Reading and storing values in a file, data structures for storing information in computer memory, Introductory concepts in object-oriented literacy and classes.

d) Teaching and learning methods - Evaluation

Delivery	Face-to-face
Use of information and communications technology	- Commercial and/or free-open source software - Multimedia applications - MS Teams/Moodle/eclass - Open courses

	Activity	Semester workload
Teaching methods	Lectures	55
	Tutorials	10
	Laboratory exercises	
	Computational exercises	
	Individual work	91
	Course total	156
Student performance evaluation	Final written exam	

e) Suggested bibliography		

1. *Microsoft Visual C# 2008 Βήμα*, John Sharp, Εκδόσεις Κλειδάριθμος 2008, Αθήνα
2. *Οδηγός της C# 3.0*, Schildt, Herbert, Εκδόσεις ΓΚΙΟΥΡΔΑΣ 2009, Αθήνα
3. Visual Studio Magazine (https://visualstudiomagazine.com)
4. Code Magazine (http://www.codemag.com)