■ CC24 - Introduction to **Programming**

GENERAL

SCHOOL	SCIENCE
DEPARTMENT	MATHEMATICS
LEVEL OF STUDIES	UNDERGRADUATE
COURSE CODE	MY24

COURSE CODE	MY24	**SEMESTER**	B
COURSE TITLE	INTRODUCTION TO COMPUTER PROGRAMMING		

INDEPENDENT TEACHING ACTIVITIES	**WEEKLY TEACHING HOURS**	**ECTS**
Lectures	5	8

COURSE TYPE	General Background
PREREQUISITE COURSES	-
LANGUAGE OF TEACHING AND EXAMINATIONS	Greek/English
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	http://eclass.uowm.gr/

LEARNING OUTCOMES

Learning Outcomes
Upon successful completion of the course students will have been taught the basic programming concepts and skills required to solve basic problems.
General Competencies
• Search, analysis and synthesis of data and information, using the necessary technologies.

- Making decisions.
- Promotion of free, creative and inductive thinking.

CONTENT OF THE COURSE

Algorithmic problem solving and programming with MATLAB.
Emphasis is given to basic programing techniques so that the students will be able to adapt easily to other programming languages. Also, the built in MATLAB functions and effective programming is presented. The course is oriented to mathematics students, problems addressed among others are series summation, vector and matrix operations, special matrices, descriptive statistics, basic plotting.
Variables, operators/expressions, assignment, input/output.
Loops and conditional statements
Matrices and Arrays. Searching /Sorting.

TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHOD	In the classroom and computer-lab.
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	Software MATLAB. e-Lectures. Use of e-class.
TEACHING ORGANIZATION	<table><tr><th>Activity</th><th>Semester Workload</th></tr><tr><td>Lectures</td><td>65 hours</td></tr><tr><td>Programming tasks in MATLAB</td><td>45 hours</td></tr><tr><td>Individual Study</td><td>90 hours</td></tr><tr><td>Course Total (25 hours per ECTS)</td><td>200 hours</td></tr></table>
STUDENT EVALUATION	Programming tasks 30%. Written final examination in theory 70%.

RECOMMENDED BIBLIOGRAPHY

1. Stormy Attaway, MATLAB: a practical introduction to programming and problem solving, Publications Kleidarithmos. (Greek)
2. Charles F. Van Loan & K-Y Daisy Fan, The MATLAB in the Computing Science and Technology, DA VINCI M.E.Π.E. (Greek).