



UNIVERSITY OF NICOSIA ΠΑΝΕΠΙΣΤΗΜΙΟ ΛΕΥΚΩΣΙΑΣ

University of Nicosia, Cyprus

Course Code COMP-254	Course Title Assembly Programming	ECTS 6
Department Computer Science	Semester Fall, Spring	Prerequisites ECE-110, COMP-111
Type of Course Elective	Field Computer Science	Language of Instruction English
Level of Course 1 st Cycle	Year of Study 3 rd	Lecturer(s) Dr Charalambos Christou
Mode of Delivery Face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

The main objectives of the course are to:

- Introduce Assembly Language Programming
- Approach programming problems with a machine-level mind set.
- Think of the CPU as an interactive tool, and to learn to monitor its operations as directly as possible
- Understand that a debugger is a programmer's best friend, not only for catching errors but to comprehend the operations of the CPU as well

Learning Outcomes:

After completion of the course students are expected to be able to:

- Demonstrate programming skills in Assembly Language
- Approach programming problems with a machine-level mind set.
- Think of the CPU as an interactive tool, and monitor its operations as directly as possible
- Utilize the Debugger not only for catching errors but to apply and practice the operations of the CPU as well

Course Contents:

- Basic Concepts
- Assembly Language Fundamentals
- Data Transfer Instructions
- Addition and Subtraction
- Data-Related Operators and Directives
- Indirect Addressing
- JMP and LOOP Instructions
- Procedures
- Conditional Processing

- Strings and Arrays

Learning Activities and Teaching Methods:

Lectures, In-class exercises, Programming Assignments

Assessment Methods:

Quizzes, Mid-Term, Final Exam, Programming Assignments

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
K. R. Irvine	for Intel-based Computers, 5 th Edition	Prentice-Hall	2007	0-13- 238310-1

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Microsoft	Microsoft MASM 6.1 Reference Guide	Microsoft		