



Course Syllabus

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

Course Objectives:

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:

1. Introduce Assembly Language Programming.
2. Approach programming problems with a machine-level mind set.
3. Think of the CPU as an interactive tool, and to learn to monitor its operations as directly as possible.
4. 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.

Course Content:

- 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 / Readings:

Title	Author(s)	Publisher	Year	ISBN
Assembly language for x86 processors, 7 th Edition	Kip R. Irvine	Pearson Education	2015	ISBN-13: 978-0-13-376940-1 ISBN-10: 0-13-376940-2

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Microsoft MASM 6.1 Reference Guide	Microsoft	Microsoft		