

## COMP B13: Computer Architecture and Organization

Student Learning Outcomes	Measure	PLO	ILO	GE
1. Describe computer representation of numbers and how computer arithmetic is carried out.	• Written exams	1	I	
	• Programming Assignments	2	III	
	• Homework			
2. Demonstrate understanding of the basic organization and operation of a digital computer at a machine language level.	• Written exams	1	I	
	• Programming Assignments	2	III	
	• Homework			
3. Write and debug simple assembly language programs.	• Written exams	1	I	
	• Programming Assignments	2	III	
	• Homework			
4. Demonstrate how fundamental high-level programming constructs are implemented at the machine-language level.	• Written exams	1	I	
	• Programming Assignments	2	III	
	• Homework			

### PLOs:

**1. Identify the appropriate software development technologies, algorithms, and scientific and mathematical principles to apply to a given problem.**

**Assessment:** The department will evaluate using examinations.

**2. Effectively design and implement programming constructs, including functions, control structures, arrays/lists, classes and objects for a given programming problem.**

**Assessment:** The department will evaluate using examinations.

**3. Effectively implement the appropriate data structures using the principles and techniques of object-oriented programming for a given programming problem.**

**Assessment:** The department will evaluate using examinations.

### ILOs:

- I. Think critically and evaluate sources and information for validity and usefulness.
- II. Communicate effectively in both written and oral forms.
- III. Demonstrate competency in a field of knowledge or with job-related skills.
- IV. Engage productively in all levels of society – interpersonal, community, the state and nation, and the world.