# F27CX Introduction to Computer Systems

## COURSE DETAILS
- **Course Code:** F27CX
- **Full Course Title:** Introduction to Computer Systems
- **SCQF Level:** 7
- **SCAF Credits:** 15
- **Available as Elective:** No

## DELIVERY LEVEL
- **Undergraduate:** Yes
- **Postgraduate Taught:** No
- **Postgraduate Research:** No

## COURSE AIMS
To introduce students to modern computer systems architecture.

To give students an appreciation of logical design and data representation.

## LEARNING OUTCOMES – SUBJECT MASTERY
- Overview of hardware/software hierarchy in contemporary computer systems;
- Understanding of purpose and function of major system hardware and software components;
- Understanding of information representation in computer systems;
- Ability to write Linux shell scripting

## LEARNING OUTCOMES – PERSONAL ABILITIES
- To be able to express arguments/problems in propositional and predicate calculus.
- To be able to communicate in using formal notations
- To be able to relate theoretical hardware/software knowledge to the computational setting in the workplace.
- To be able to articulate the purposes and functions of the hardware/software set-up in the workplace.
F27CX Introduction to Computer Systems

SYLLABUS

• Overview
• Hardware components - peripherals, memory & CPU.
• Boolean algebra.
• Low-level information representation.
• CPU organisation.
• Introductory assembly language programming.
• Operating system: I/O; interrupts; scheduler; virtual memory; file system.
• Concurrency: processes; threads; synchronisation; shared & distributed memory; distributed & parallel architectures.
• Language processors: compiler; interpreter; assembler; loader.
• Linux shell scripting

COURSE RELATIONSHIPS

N/A

LOCATION AND ASSESSMENT METHODS

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