

# Introduction to Computer Systems CCE1011

## Coursework 2012-2013

The coursework carries 10% of the total mark of the course module.

Every student will be assigned one particular topic. There can be no change from the topic assigned.

A write up of about ten pages is to be presented, **individually**, on the topic. If it is felt necessary there will be a further oral examination.

While you are encouraged to use the resources on the Internet, please be aware that some double checking is necessary as the data is not always necessarily accurate, especially if it is dated. It is clear that cut and paste from Internet to your document does not make this your work. One appreciates that diagrams, illustrations, tables etc. already available, can be made use of, (duly referenced), but you must put an input at the level of comparison, discussion, advantages and disadvantages etc. of whatever topic, technology, etc. you are writing on.

In particular you are expected to take ONE real existing item in whichever topic you are working, describe this real item and compare and relate it to the theoretical concepts

## Topics list

1. Dynamic RAM organization - chip design at block level; types of memory cards; interface to PC bus; memory for error correction; size, speed, refresh, power consumption
2. Hard Disc system organization - both physical and logical, coding, reading and writing. The way the HDD is integrated within the PC bus system. Addressing, file system organisation used. RAID systems for large information systems
3. DVD organisation – size, organisation, addressing; and DVD writing – methods, data codes, error correcting codes; – AVI code (what is the standard; how is it defined, organised and used on a DVD. Contrast with any one other video code in use. Recent technological advances including Blu Ray
4. (i) The Flash Memory – history, description, operation, types, size, applications advantages and disadvantages compared to other forms of data storage.  
(ii) The USB system – history, description, operation, types, size, applications; advantages and disadvantages compared to other I/O connections to the PC