

Pre-Requisite Modules code(s)	Co-Requisite Modules code(s)	ECTS Credits	Module Code	Module Title
None	None	5	CMPU1002	Building a PC

8.1.1. Building a PC

Module author: Damon Berry

Module Description:

The core ingredient of this module is a progressive practical activity where students are given an opportunity to build a personal computer. As each component is added to the computer, the student learns about how that component functions and interacts with the rest of the computer system. Although it does not comprehensively cover all of the constituent technologies, this module does provide a general and practical overview of the principles of operation of key components of a PC

Module aim

The aim of this module is to introduce students to practical aspects of PC architecture and assembly and to give students sufficient knowledge to help them to maintain and upgrade a personal computer

Learning Outcomes:

On completion of this module, the learner will be able to

- describe the components and peripherals of a functioning personal computer,
- provide an overview of the functioning of the various parts of a computer system
- demonstrate an understanding of interoperation of components and peripherals
- successfully build a computer system from constituent components in a safe and effective manner
- follow best practice in relation to PC construction
- demonstrate understanding of how information is passed between components of a computer system
- demonstrate understanding of operating systems fundamentals and operating system installation
- demonstrate understanding of external PC connections e.g. a simple standalone peer-to-peer network

Learning and Teaching Methods:

Lectures, group work, assembly of a PC and installation and basic functionality of operating systems, self-directed learning, quizzes, summarising and vocal presentation of technical documentation.

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Module content:

An introduction to Modern PC Architecture, including CPUs, RAM, ROM, CD ROM, DVD ROM, hard disk, PC buses, keyboard, monitor and mouse. The main issues associated with assembling a functioning computer system. Operating system fundamentals and installation, new personal computing technologies.

Module Assessment

Assessment is via 2-3 short assessments (totalling 15%) and one substantial end-of-module written assignment accompanied by an assembled computer with installed operating systems and assessment of students contribution to same (totalling 85%). All assignments will be on topics related to PC architecture, the task of assembling a PC and installing operating systems.

Essential Reading:

Bigelow, S.J., 2001, Troubleshooting, Maintaining and Repairing PCs Osborne McGraw-Hill 1500pp (Hardback), ISBN: 0072132728

Supplemental Reading:

Thompson, R.B, Thompson, B.F., 2003, PC Hardware in a Nutshell, O'Reilly, 874 pp, ISBN: 059600513X

Further Details:

To be delivered in one semester. Contact hours 3 per week; 1 lecture, 2 lab

Date of Academic Council approval