## Devices and Platforms

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| *SMS Code* | IN520001 | *Directed Learning hours* | 60 |
| *Level* | 5 | *Workplace or Practical Learning hours* | nil |
| *Credits* | 15 | *Self-Directed Learning hours* | 90 |
| Prerequisites | None | *Total Learning Hours* | 150 |
| *This course approved in another Programme: No* | | | |

***Aims***

This course introduces students to the range of devices, platforms, and concepts necessary to provide a foundation for further learning.

***Learning Outcomes***

At the successful completion of this course, students will be able to:

1. Use systems tools to configure, maintain, and secure systems.
2. Perform standard troubleshooting procedures on typical faults (both hardware and OS).
3. Identify, explain, and install the main components of a computer.
4. Connect and configure a range of devices.
5. Explain basic operating system functionality.
6. Explain basic function of microprocessors.
7. Use embedded development platforms to solve simple problems.
8. Identify sustainability issues involved in purchasing, using, and disposing of devices.

***Indicative Content***

* Installing, configuring and selecting PC hardware components
* Operating systems installation and maintenance (systems tools)
* Bootloaders
* Overview of operating systems (mobile, desktop, server, etc.)
* Use a VM & develop basic understanding of virtualisation
* Formats (media formats; open vs. binary)
* Basic use of transmission protocols (e.g. FTP, SSH)
* File systems
* Backup and RAID systems
* Troubleshooting hardware and software
* Connecting and configuring devices (Bluetooth, wifi, printers, Chromecast, AppleTV, etc.)/Mounting drives
* Command line proficiency
* Basic network configuration
* ‘Embedded’ (Raspberry Pi, Arduino, Development platforms)
* Environmental impact of IT

***Assessment***

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| **Assessment Activity** | **Weighting** | **Learning Outcomes** |
| Quizzes | 20% | 1,4,5 |
| Lab work | 15% | 1,2,3 |
| Theory Exam | 35% | 1,2,3,4,5 |
| Practical Exam | 20% | 1,4,5 |
| Assignment | 10% | 2,3,4 |

A single final result to be entered in SMS at completion.

***Resources***

Online/Lab Book