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| Title of the Module / Unit | Computer Systems and Network Fundamentals |
| Module / Unit Description Provide a brief description of the module. | This module is designed to enable learners to understand computer systems and computer networking concepts and apply theoretical knowledge to practical application when building, configuring and maintaining computer networking systems. |
| Learning Outcomes | Competences: – at the end of the module/unit the learner will have acquired the responsibility and autonomy to: |
| | <ul style="list-style-type: none"> a) Compare different types of computer systems b) Be able to build and configure computer systems c) Evaluate the impact of current network technology, communication and standards d) Be able to implement and support networked systems |
| | Knowledge – at the end of the module/unit the learner will have been exposed to the following: |
| | <ul style="list-style-type: none"> a) Understand the hardware components of computer systems b) Understand the software components of computer systems c) Undertake routine computer maintenance d) Understand the diverse types of network systems and devices in common use and how the different technologies operate and communicate e) Understand the OSI and TCP/IP and their relationship to the operation of network systems |
| Skills – at the end of the module/unit the learner will have acquired the following skills: | |

Applying knowledge and understanding

The learner will be able to:

- a) Understand the function of computer systems
- b) Evaluate the suitability of a system design specification
- c) Build and configure a computer system to meet a design specification
- d) Recommend potential enhancements for the networked systems

Judgment Skills and Critical Abilities

This section has been made sufficiently open to accommodate both vocational and academic orientations. Applicants can refer to Judgement Skills, or Critical Abilities (critical skills, dispositions, values and actions), or both.

The learner will be able to:

- a) Analyse an existing network infrastructure and provide for improvements
- b) Explore a problem and identify different ways to tackle it
- c) Plan and implement at least one way of solving a problem
- d) Check if the problem has been solved and review his/her approach to problem solving

Module-Specific Communication Skills

(Over and above those mentioned in Section B)

The learner will be able to:

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| | <p>a) Explain the function of the system unit components and how they communicate</p> <p>b) Describe the purpose, features and functions of different operating systems</p> <p>c) Justify a subnetworking scheme, which could be used on medium or large scale systems, and identify individual subnetworks</p> <p>d) Analyse an existing network infrastructure and provide recommendations for improvement</p> |
| | <p><i>Module-Specific Learner Skills</i></p> <p>(Over and above those mentioned in Section B)</p> <p>The learner will be able to</p> <p>a) Explain and implement the installation and configuration of an additional or replacement device</p> <p>b) Evaluate specifications for commercially available computer systems and justify the suitability for a given situation</p> <p>c) Recommend a subnetworking scheme for a small-scale network infrastructure</p> |
| | <p><i>Module-Specific Digital Skills and Competences</i></p> <p>(Over and above those mentioned in Section B)</p> <p><i>(These digital skills are covered by the primary objectives of this course – so the skills referred to above address this section)</i></p> |

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| | The learner will be able to | |
| | a) b) c) etc. | |
| Hours of Total Learning for this Module / Unit 1 ECTS is equivalent to 25 total hours of learning, inclusive of contact hours, supervised placement and practice hours, self-study hours and assessment hours. At least 20% (5 hours for every ECTS) must be <u>contact hours</u> or as otherwise established from time to time by NCFHE. | Total Contact Hours ¹ <div style="float: right; border: 1px solid black; padding: 2px 10px;">110</div> (Contact Hours are hours invested In learning new content under the Direction of a tutor/lecturer (e.g. lectures, participation in online forums, video-lectures). | Supervised Placement and Practice Hours <div style="float: right; border: 1px solid black; padding: 2px 10px;">25</div> (During these hours the learner is supervised, coached or mentored.) |
| | Self-Study Hours <div style="float: right; border: 1px solid black; padding: 2px 10px;">300</div> (Estimated workload of research and study.) | Assessment Hours <div style="float: right; border: 1px solid black; padding: 2px 10px;">65</div> (Examinations/ presentations/ group work/ projects etc.) |
| Total Learning Hours of this Module | _____500_____ Hours | |
| Percentage of Total Contact Hours delivered online. In the case of online/blended learning, kindly indicate the total number of contact hours delivered online and those face-to-face. | Contact Hours Delivered Online <div style="float: right; border: 1px solid black; padding: 2px 10px;">N/A</div> | Contact Hours Delivered Face-to-Face <div style="float: right; border: 1px solid black; padding: 2px 10px;">100%</div> |

¹ In the case of online learning, synchronous and asynchronous learning activities under the direction and control of an instructor are considered as contact hours.