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| <b>Module Title:</b>   | Networking  |
| <b>Language of Instruction:</b>  | English   |
| <b>Credits:</b>  | 10  |
| <b>NFQ Level:</b>  | 6   |
| <b>Module Delivered In</b>   | <a href="#">1 programme(s)</a>  |
| <b>Teaching &amp; Learning Strategies:</b>   | Combination of lectures and practical laboratory sessions. Lectures will take the form of traditional theory and tutorials. Laboratory sessions take the form of individual & group work.       |
| <b>Module Aim:</b>   | To provide the student with: 1. the skills necessary to build simple computer networks. 2. the basic concepts of networking. 3. the capability to understand basic network device configuration |
| <b>Learning Outcomes</b>   |   |
| <i>On successful completion of this module the learner should be able to:</i>  |   |
| LO1  | Describe and compare network models   |
| LO2  | Examine IOS (Internet Operating System) basic features  |
| LO3  | Identify network media and construct network cables   |
| LO4  | Identify and explain IP addresses   |
| LO5  | Explore and construct LANs and WANs   |
| LO6  | Test and troubleshoot computer networks   |
| <b>Pre-requisite learning</b>  |   |
| <b>Module Recommendations</b><br><i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>         |   |
| No recommendations listed  |   |
| <b>Incompatible Modules</b><br><i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i> |   |
| No incompatible modules listed   |   |
| <b>Co-requisite Modules</b>  |   |
| No Co-requisite modules listed   |   |
| <b>Requirements</b><br><i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>          |   |
| No requirements listed   |   |

**Module Content & Assessment**

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| <b>Indicative Content</b>   |
| <b>Networking Basics</b><br>Network devices, types of networks, Internet (15%)                |
| <b>Network Models and Protocols</b><br>Network standards and rules, OSI & TCP/IP models (20%) |
| <b>Network OS</b><br>Router and Switch IOS architecture & commands (30%)                      |
| <b>OSI Lower Layers</b><br>Physical, Data Link, Network (35%)                                 |

|                             |          |
|-----------------------------|----------|
| <b>Assessment Breakdown</b> | <b>%</b> |
| Continuous Assessment       | 100.00%  |

| <b>Continuous Assessment</b> |   |                          |                   |                        |
|------------------------------|---|--------------------------|-------------------|------------------------|
| <i>Assessment Type</i>       | <i>Assessment Description</i>   | <i>Outcome addressed</i> | <i>% of total</i> | <i>Assessment Date</i> |
| Practical/Skills Evaluation  | Two practical examinations to demonstrate the achievement of the learning outcomes  | 1,2,3,4,5,6              | 40.00             | n/a                    |
| Practical/Skills Evaluation  | Weekly practical/laboratory work is designed to allow students to demonstrate the achievement of the learning incomes           | 1,2,3,4,5,6              | 20.00             | n/a                    |
| Examination                  | Written Test Block 1: The students will be given a written test to assess their knowledge of network devices and protocols      | 1,2,5                    | 20.00             | n/a                    |
| Examination                  | Written Test 2: The students will be given a written test to assess their knowledge of network media & network operating system | 3,4,6                    | 20.00             | n/a                    |

|                                     |
|-------------------------------------|
| No Project                          |
| No Practical                        |
| No End of Module Formal Examination |

**SETU Carlow Campus reserves the right to alter the nature and timings of assessment**

**Module Workload**

| <b>Workload: Full Time</b> |                    |  |
|----------------------------|--------------------|--|
| <i>Workload Type</i>       | <i>Frequency</i>   | <i>Average Weekly Learner Workload</i> |
| Lecture                    | 30 Weeks per Stage | 1.00                                   |
| Laboratory                 | 30 Weeks per Stage | 3.00                                   |
| Estimated Learner Hours    | 30 Weeks per Stage | 2.67                                   |
| Total Hours                |                    | 200.00                                 |

**Module Delivered In**

| Programme Code | Programme                                       | Semester | Delivery  |
|----------------|---|----------|-----------|
| CW_KWCAP_C     | <a href="#">Higher Certificate in Computing</a> | 1        | Mandatory |