* 1. **Connecting Networks**

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| *SMS Code* | IN615007 | *Directed Learning hours* | 60 |
| *Level* | 6 | *Workplace or Practical Learning hours* | nil |
| *Credits* | 15 | *Self-Directed Learning hours* | 90 |
| Prerequisites | IN615006 | *Total Learning Hours* | 150 |
| *This course approved in another Programme: No* | | | |

***Aims***

To introduce students to WAN technologies and network services required by converged applications in complex networks.

***Learning Outcomes***

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

Compare and contrast different WAN technologies

Explain virtual private networks (VPNs) and tunnelling

Configure and troubleshoot serial and broadband connections

Configure and troubleshoot IPSec tunnelling operations

Monitor and troubleshoot network operations using syslog, SNMP, and NetFlow

Design network architectures, including borderless networks, data center virtualisation, and collaboration technology and solutions.

***Indicative Content***

* Hierarchical Network Design and associated WAN technologies
* Configuring Serial Connections using PPP and Frame Relay proocols
* Comparing Broadband solutions and configuring xDSL connectivity
* Using Syslog and SNMP for network monitoring
* Using a systematic approach for Troubleshooting
* Understanding Network architectures such as borderless networks, virtualisation and collaboration

***Assessment***

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| **Assessment Activity** | **Weighting** | **Learning Outcomes** |
| Weekly Quiz | 25% | All |
| Skills based assessment | 25% | 3,4,5, 6 |
| Theory Exam | 50% | All |

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

***Resources* Required:**

Cisco Network Academy Routing and Switching series “Connecting Networks”.

Student Lab Manual.