Functional Area: Network Infrastructure & Operation (Planning & Design)

1.	Title	Perform network modelling
2.	Code	ITCSNO514A
3.	Range	This UOC concerns network modelling when designing internal networks or networks for clients. Networks can be voice, data, wireless, mobile, WAN, MAN, LAN, etc.
4.	Level	5
5.	Credit	4
6.	Competency	**6.1 Possess the knowledge in the subject area** Performance Requirement • Critically understand requirements from either internal or external customers and the current network architecture and characteristics • Experienced with network capacity planning (current and growth forecast) • Conversant with current and emerging technologies and their applications • Extensively experienced with various network architecture, network technologies and its operating characteristics, inclusive routing, switching, transmission, etc. • Experienced with network simulation and modelling techniques and use of application tools. • Understand health and safety procedures and government regulations **6.2 Perform network modelling** Be able to: • Define and design different network scenarios based on the customer requirement, such as different network architectures, performance, resilience, sizes, schedules, etc. • Identify network components required hardware, software, site, materials • Feed in the network requirements and components details into simulation application. • Build prototype for proof of concept (POC) to understand performance, availability, reliability and resilience, etc • Identify the necessary documents and the required format and relevant information to facilitate decision making or network implementation. This information includes: network design plans, drawings, routes, performance figures, etc. • Manage the documentation process and present the models to stakeholders with recommendation for deployment **6.3 Exhibit professionalism** • Always take into consideration and strike a proper balance among all related technological, political, social, environmental and legal factors
7.	Assessment Criteria	The integrated outcome requirements of this UoC are the abilities to: i. liaise effectively with customers to acquire the network requirements accurately ii. plan and produce different network scenarios for modelling iii. design modelling or/and network testing tools that can be used to determine the feasibility of the planned network designs iv. prepare the appropriate documentation and recommendation in the format required by stakeholders (internal department or external customers)
	Remark	