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

1.	Title	Determine how to apply/integrate new technologies with existing networks
2.	Code	ITCSNO507A
3.	Range	This UOC concerns identifying how to apply or integrate new technologies into existing networks. New technologies imply newly released telecommunication technologies (wireless, mobile, LTE, WiMAX, high speed optical, modulation, etc.), products, systems (hard or soft, OSS, transmission, cable, switch, etc.), components, procedures (standards, design, installation, operational, maintenance) etc.
4.	Level	5
5.	Credit	4
6.	Competency	**6.1 Possess the knowledge in the subject area** Performance Requirement • Experienced with network planning (current and growth forecast) • In tune with the current market and emerging network technologies • Comprehend product specifications, and capable of determining its applications and/or integration capabilities • Experienced with product testing and evaluation techniques • Experienced with various different protocols standards and network technologies which could be wired-line or mobile network such as ATM, IP, GSM, LTE, NGN, MPLS, etc. • Understand health and safety procedures and government regulations • Possess extensive knowledge of the organisation's current network infrastructure design and operational status **6.2 Determine how to apply/ integrate new technologies with existing networks** Be able to: • Work with appropriate parties to determine the objectives, scope, requirements, deliverables, and time schedules of the technology integration study • Apply suitable methodology in performing the study and plan the activities involved • Work with network operation team to determine what critical factors in existing network may affect normal operation when new technology is applied and create a list of "Critical Factors" • Seek and acquire the necessary information related to the new technology which enables the evaluation process to proceed • Systematically seek information or perform test of network component to determine solutions for each "Critical Factor" • Analyse study results, particularly focusing on the network operation factors, risks, interoperability, cost, benefits, etc. • Produce a study report comprising the required deliverables, such as complexity of applying the new technology, risk factors, cost and benefits it generates, and business and operational values. • Present the study report with summary and recommendations to relevant parties **6.3 Exhibit professionalism** • Documents are produced at the correct level for the readers and comply with the organisation's policies and standards • Always take into consideration and strike a proper balance among all related technological, political, social, environmental and legal factor
7.	Assessment Criteria	The integrated outcome requirements of this UoC are the abilities to: i. communicate effectively with relevant parties to determine the scope of study, the objectives, the deliverables of the feasibility evaluation ii. apply suitable study methodology to implement the evaluation process iii. acquire relevant information to perform the study iv. formulate a study report to deliver the required objectives of the study v. present effectively the report to relevant parties with recommendations to assist decision making
	Remark	