

**Functional Area: Network Infrastructure & Operation (Operation / Support & Maintenance)**

1. Title	Perform software development for internal use
2. Code	ITCSNO419A
3. Range	This UoC concerns development of software for “in house” use. The software may be tools used in Network Operation Centre (NOC) such as monitoring tools, alarm setting or statistic collection tools. It could also be an enhancement of vendor products or other functional requirements defined by other colleagues or departments.
4. Level	4
5. Credit	3
6. Competency	<p style="text-align: center;"><u>Performance Requirement</u></p> <p>6.1 Possess the knowledge in the subject area</p> <ul style="list-style-type: none"> <li>• Possess extensive experience in software engineering processes such as gathering functional requirements and software designing, programming, testing and module or system integration</li> <li>• Possess extensive knowledge of the functions, API, firmware and operating characteristics of vendor’s hardware/software components</li> <li>• Possess extensive experience in the organisation software development standards, quality control policies</li> <li>• Possess extensive knowledge in network software tools, network technology and protocols. Apply these tools for application test and functional verification</li> <li>• Capable of using computerised systems software in telecommunication systems, embedded systems, firmware, etc.</li> </ul> <p>6.2 Perform software development for internal use</p> <p>Be able to:</p> <ul style="list-style-type: none"> <li>• Comprehend and confirm with colleagues on the functional requirements from requirement specification or other documents like AD (Architecture Design), HLD (High Level Design) or DLD (Detailed Level Design)</li> <li>• Perform program module (unit) design after decomposing to functional modules</li> <li>• Develop the program modules using appropriate programming language with IDE (Integrated Development Environment), if any, and ensure programs are fully documented</li> <li>• Perform comprehensive program module tests to comply with the organisation’s quality requirements</li> <li>• Perform module integration tests with other software modules, systems or vendor network components</li> <li>• Document the functional module decomposition, program design, tests performed, testing results for quality assurance by appropriate people. Perform application usage training, if required</li> </ul> <p>6.3 Exhibit professionalism</p> <ul style="list-style-type: none"> <li>• Follow software development methodologies</li> <li>• Follow industry and organisation software development standards, quality assurance policies and good practices</li> </ul>
7. Assessment Criteria	The integrated outcome requirements of this UoC are the abilities to: <ol style="list-style-type: none"> <li>i. develop applications conforming to the Software Development Life Cycle (SDLC) techniques</li> <li>ii. use appropriate software development tools to develop applications conforming to the organisation and industry standards</li> <li>iii. integrate newly developed application seamlessly with current systems and ensure users are able to use the new application effectively</li> </ol>
Remark	