Information and Communications Technology Industry Training Advisory Committee
Software Products and Software Services (SW) branch
Unit of Competencies

1. Title	Decompose embedded software system model into manageable layers	
2. Code	ITSWAR621A	
3. Range	Abstract and partition the embedded software system into manageable layers as well as apply the appropriate modelling techniques to support the design and development of embedded software systems [Architecture – Embedded Software Architecture]	
4. Level	6	
5. Credit	6	
6. Competency		Performance Requirement
	6.1 Understand the abstraction and partitioning techniques for embedded software systems	Be able to explain the abstraction and partitioning techniques for embedded software systems
	6.2 Understand the various modelling techniques available for the design and development of embedded software systems	Be able to explain the various modelling techniques available for the design and development of embedded software systems See Remark 1 for some examples of modelling techniques.
	6.3 Apply the appropriate modelling techniques and tools in the design and development of embedded software system	Be able to ▪ abstract the needed software functions into structured layers for isolation of hardware, environmental and other dependence ▪ perform the necessary partitioning of the embedded software into manageable building block with clear interface boundaries ▪ use appropriate models in the analysis and design of these software building blocks
	6.4 Apply the appropriate modelling techniques and tools in the design and development of embedded software system in a professional way	Be able to demonstrate high degree of professionalism and competence in the application of modelling tools
7. Assessment Criteria	The integrated outcome requirement of this UoCs is the ability to use appropriate modelling tools in the design and development of embedded software systems, which is suitably partitioned into manageable layers.	
Remark	1. Some examples of modelling techniques are a) finite state machines; b) data flow model; c) multi-threading; and d) concurrent multi-processing models. 2. Pre-requisite: ITSWAR619A 3. Co-requisite: ITSWAR620A	