

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

1. Title	Propose a high level design (HLD) of the software	
2. Code	ITSWDM602A	
3. Range	Formulate, analyse, evaluate and propose a high level design (HLD) of the software based on its SRS and AD in the context of development of software products / services within an organisation or for a client [Design Development Maintenance – Software/Systems Design]	
4. Level	6	
5. Credit	1	
6. Competency	<p>6.1 Understand the requirements of an high level design of software/system</p> <p>6.2 Formulate a high level design of the software/system</p>	<p><u>Performance Requirement</u></p> <p>Be able to</p> <ul style="list-style-type: none"> ▪ understand the basic principles, methodologies and techniques in the whole software process life cycle ▪ appreciate the objectives of software/system high level design and its relation with architecture design and other phases of the software process cycle ▪ understand the software/system requirements specification and architecture design <p>Be able to</p> <ul style="list-style-type: none"> ▪ describe the approach or methods used for this software design ▪ describe any assumptions, limitations and constraints regarding the composition of each system component and their dependencies ▪ describe how each sub-system is structured into program components ▪ define the function of each program component and dependencies between them ▪ describe its high level (logical) design of each program component, its logical interfaces and interaction with other components ▪ if necessary, decompose a program component into sub-components to manage complexity ▪ document a software/system high-level design using appropriate models describing the composition of the software/system and its components ▪ describe the functionalities of each system component and their dependencies and interaction ▪ highlight part of the high level design involving business process re-engineering

	<p>6.3 Analyse and evaluate the formulated high level design of the software/system</p> <p>6.4 Exhibit professional skills in the formulation of high level design</p>	<p>Be able to</p> <ul style="list-style-type: none"> ▪ determine whether the functional and non-functional requirements have been fully considered by the design ▪ employ appropriate modelling tools to analyse the design ▪ evaluate whether the high level design suffices to fit the function of program components by means of use cases and viewpoints ▪ use the adopted design method's principles and criteria to evaluate whether the design is a good design ▪ determine whether there is a need to re-engineer business processes in the design ▪ identify any incompatible aspects of the design due to the inconsistent or conflicting requirements <p>Be able to</p> <ul style="list-style-type: none"> ▪ adapt standard design methodologies and principles for the high level design of the software/system to cater for the specific organization's environment ▪ produce the high level design in an efficient and effective manner ▪ follow the organisation's standards and guidelines where applicable ▪ obtain agreement among stakeholders
7. Assessment Criteria	<p>The integrated outcome requirements of this UoCs are the abilities to formulate a high level software/system design which can:</p> <p>(i) ensure that functional and non-functional requirements are met;</p> <p>(ii) describe the composition of the software system, the functionality of each program component as well as its dependency and interaction with other components; and</p> <p>(iii) highlight part of the high level design involving business process re-engineering.</p>	
Remark		