

Module code	SS-2208		
Module Title	System and Software Development		
Degree/Diploma	Bachelor of Science (Computer Science)		
Type of Module	Major Core		
Modular Credits	4	Total student Workload	10 hours/week
		Contact hours	4 hours/week
Prerequisite	SS-2201 Internet Programming and Development		
Anti-requisite	SS-2204 Systems Analysis and Design		
Aims			
The student apply standard techniques in systems analysis, translate user requirements into feasible designs, understand introductory software engineering processes in the creation of medium- to large-scale system and software design and development.			
Learning Outcomes			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order :	20%	<ul style="list-style-type: none"> - understand basic concepts of system and software development based on software engineering principles; feasibility study, software process, software process modelling, risk analysis, requirement analysis and system specification - understand designing, prototyping, programming, validation and testing 	
Middle order :	60%	<ul style="list-style-type: none"> - design system and software using object-oriented analysis: encapsulation, inheritance, composition, use case, events, services, UML - analyse different software process models; water fall model, incremental development models and reuse-oriented software engineering models - model system and software using structured analysis: data flow, data models, data normalization, entity relationship, process specification - use software engineering tools: integrated development environments, versioning tools, collaborative tools, project management tools, documentation tools and testing tools 	
Higher order:	20%	<ul style="list-style-type: none"> - apply object-oriented techniques to model a system - create system and software design documents for developers 	
Module Contents			
<ul style="list-style-type: none"> - System and software design: system and software design concepts and methods, system and software modelling tools, system and software modelling, object oriented design for system and software modelling - System and software development: basic concepts of system and software development, software engineering, software development life cycles, software development processes and paradigms, system and software development 			
Assessment	Formative assessment	Interactive Quizzes and Feedback	
	Summative assessment	Examination: 50% Coursework: 50% <ul style="list-style-type: none"> - 2 class tests (20%) - 1 written assignment (15%) - 1 laboratory exercise (15%) 	