

Module code	SS-3407		
Module Title	Computer Programming		
Degree/Diploma	Undergraduate GenNEXT Bachelor degree		
Type of Module	Breadth		
Modular Credits	4	Total student Workload	10 hours/week
		Contact hours	4 hours/week
Prerequisite	None		
Anti-requisite	SS-3403 Programming for Scientists		
Aims			
The module is designed for students to understand the fundamental principles of programming and to apply the basic programming concepts in problem solving and software 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 the basic principles of programming concepts - understand the basic programming concepts to design a solution to a computational problem 	
Middle order	60%	<ul style="list-style-type: none"> - construct expressions using arithmetic, Boolean, bitwise and pointer operations - construct nested code blocks using selection and iteration - use common standard library functions - implement functions 	
Higher order:	20%	<ul style="list-style-type: none"> - write programs to solve numerical problems 	
Module Contents			
<ul style="list-style-type: none"> - Program development: programming cycle, programming tools - Data types: signed, unsigned, bits, pointers, integer, string, double - Memory allocation: static, stack, heap, variables, arrays (index access, pointer access) - Operations: arithmetic, bitwise, typecast, pointer arithmetic and indirection - Control structures: sequence, selection, loop - Arrays: memory allocation, index access, pointer access - Common library functions: console IO, file IO, string, memory 			
Assessment	Formative assessment	Practical Exercises and Feedback	
	Summative assessment	Examination: 50% Coursework: 50% <ul style="list-style-type: none"> - 1 class test (25%) - 1 written assignment (25%) 	