Module Details	Module Details		
Module Code:	PROG C7Z23		
Full Title:	Programming Principles APPROVED		
Valid From::	/alid From:: Semester 1 - 2019/20 (June 2019)		
Language of Instruction: English			
Duration:	2 Semesters		
Credits::	10		
Module Owner::	Tony McCarron		
Departments:	Unknown		
Module Description:	Students completing this module will be capable of using a problem-solving approach to design, build and test solutions to fundamental programming problems.		

Module Learning Outcome				
On successful	In successful completion of this module the learner will be able to:			
#	Module Learning Outcome Description			
MLO1	Design, build and test programming solutions using appropriate fundamental programming constructs.			
MLO2	Use simple data structures such as arrays and array lists to solve problems.			
MLO3	Use abstraction and decomposition as techniques to create well structured solutions using both user-defined static methods and standard library methods.			
MLO4	Read and write from files using library classes.			
MLO5	Create programs with GUI interfaces.			
Pre-requisite	Pre-requisite learning			

Module Recommendations This is prior learning (or a practical skill) that is strongly recommended before enrolment in this module. You may enrol in this module if you have not acquired the recommended learning but you will have considerable difficulty in passing (i.e. achieving the learning outcomes of) the module. While the prior learning is expressed as named DkIT module(s) it also allows for learning (in another module or modules) which is equivalent to the learning specified in the named module(s).

No recommendations listed

Module Indicative Content				
Programming Constructs /ariables, types, expressions and assignment, Console based input-output, validation.				
Control Structures Conditional and iterative control structures				
Api Familiarity with the methods of library classes e.g. String, Math, Random etc.				
fethods Aethod definition, invocation, variable scope, parameter passing, return types, and method overloading				
Simple Data Structures Arrays and ArrayLists.				
Input-output Files : reading and writing, GUI based programming.				
Module Assessment				
Assessment Breakdown	%			
Course Work	100.00%			
Module Special Regulation				

Assessments

ourse Work			
Assessment Type	Continuous Assessment	% of Total Mark	20
larks Out Of	100	Pass Mark	40
iming	Every Second Week	Learning Outcome	1,2
Ouration in minutes	0	-	
Assessment Description Formative assessment consisting of opic. Assessments will be both indi		eoretical topics covered and to give practice ir	building programming solutions relevant to the current
ssessment Type	Class Test	% of Total Mark	20
larks Out Of	100	Pass Mark	40
ïming	Sem 1 End	Learning Outcome	1,2
Ouration in minutes	120		
Assessment Description A lab-based practical exam, summa	ative in nature giving the student the opportunity d	emonstrate their problem solving ability and th	eir knowledge of topics covered to this point.
ssessment Type	Continuous Assessment	% of Total Mark	20
Marks Out Of	100	Pass Mark	40
iming	Every Second Week	Learning Outcome	1,2,3,4,5
Duration in minutes	0	Lourning Outcome	1,2,0,7,0
Assessment Description	f practical exercises designed to build upon the th	eoretical topics covered and to give practice ir	building programming solutions relevant to the current
Assessment Type	Class Test	% of Total Mark	40
Marks Out Of	100	Pass Mark	40
iming	Sem 2 End	Learning Outcome	1,2,3
Ouration in minutes	120		
o Practical			
o Final Examination			
P Final Examination			
o Final Examination Part Time On Campus ourse Work	Continuous Assessment	% of Total Mark	20
o Final Examination Part Time On Campus ourse Work ssessment Type	Continuous Assessment 100	% of Total Mark Pass Mark	20 40
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 Assessment Type
 Class Test
 % of Total Mark
 40

 Marks Out Of
 100
 Pass Mark
 40

 Timing
 Sem 2 End
 Learning Outcome
 1,2,3

Duration in minutes

120

	Assessment Description A lab-based practical exam, summative in nature giving the student the opportunity demonstrate their problem solving ability and their knowledge of topics covered in this module.
	No Project
1	

No Practical

No Final Examination

Reassessment Requirement

A repeat examination Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.

Workload: Full Time On	Campus				
Workload Type	Contact Type	Workload Description	Frequency	Average Weekly Learner Workload	Hours
Practical	Contact	Three 2-hour lab-based classes with the delivery of new content integrated with practical implementation.	Every Week	6.00	6
Independent Study	Non Contact	Independent work both lecturer- and and self- directed.	Every Week	1.00	1
Directed Reading	Non Contact	Investigation and directed learning from both books and online resources.	Every Week	1.00	1
	Total Weekly Learner Workload	8.00			
				Total Weekly Contact Hours	6.00
Workload: Part Time On	Campus				
Workload Type	Contact Type	Workload Description	Frequency	Average Weekly Learner Workload	Hours
Practical	Contact	One 3-hour lab based class with the delivery of new content integrated with practical implementation.	Every Week	3.00	3
Independent Study	Non Contact	Independent work both lecturer- and and self- directed.	Every Week	3.00	3
Directed Reading	Non Contact	Investigation and directed learning from both books and online resources.	Every Week	2.00	2
	8.00				
				Total Weekly Contact Hours	3.00

Recommended Book Resources

Julie Anderson & Herve J. Franceschi. (2018), Java Illuminated, 5th Edition. Jones & Bartlett Learning, [ISBN: 9781284140996].

Stuart Reges & Marty Stepp. (2014), Building Java Programs : A back to basics approach., 3rd Edition. Pearson Education, [ISBN: 9780133449440]. This module does not have any article/paper resources

Other Resources

Website, CodingBat, Stanford, Nick Parlante, https://codingbat.com/java Website, Marty Stepp. (2019), Practice-It, University of Washington, https://practiceit.cs.washington.edu

Website, 'Java API', https://docs.oracle.com