


1	Course Name:	Python Programming										Version Number:	VE1																																																																																																																																																																																											
	Course Code:	CT108-3-1										Effective Date:	01 Mar 2023																																																																																																																																																																																											
	Course Classification:	Elective (Core)																																																																																																																																																																																																						
2	Synopsis:	This module aimed at providing students with fundamental problem solving methods with flowchart and pseudocode. The module will introduce procedural programming in Python emphasising computational thinking to provide a foundation for software development required by students for their programmes of study.																																																																																																																																																																																																						
3	Name(s) of Academic Staff:	1	Viknesh A/L Ramamoorthy																																																																																																																																																																																																					
		2	Aziah Abdola																																																																																																																																																																																																					
		3	Sathiapriya A/P Ramiah																																																																																																																																																																																																					
4	Semester and Year offered:	See Programme Specification (Module may be delivered on multiple programmes and therefore in different years/semesters)																																																																																																																																																																																																						
5	Credit Value:	3																																																																																																																																																																																																						
6	Pre-requisite/ co-requisite (if any):	-																																																																																																																																																																																																						
7	Course Learning Outcomes (CLO)	 <table border="1"> <tr> <td>CLO1</td> <td>Explain the fundamental of software development and programming concepts (C2, PLO1)</td> </tr> <tr> <td>CLO2</td> <td>Construct a programmable solution using appropriate problem solving methods and programming concepts to given scenario. (C3, PLO2)</td> </tr> <tr> <td>CLO3</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>												CLO1	Explain the fundamental of software development and programming concepts (C2, PLO1)	CLO2	Construct a programmable solution using appropriate problem solving methods and programming concepts to given scenario. (C3, PLO2)	CLO3																																																																																																																																																																																						
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<p>Indicate the primary causal link between the CLO and PLO by ticking '✓' in the appropriate box.</p> <p>C1 = Knowledge &amp; Understanding, C2 = Cognitive Skills, C3A = Practical Skills, C3B = Interpersonal Skills, C3C = Communication Skills, C3D = Digital Skills, C3E = Numeracy Skills, C3F = Leadership, Autonomy &amp; Responsibility, C4A = Personal Skills, C4B = Entrepreneurial Skills, C5 = Ethics &amp; Professionalism</p>																																																																																																																																																																																																								
9	Transferable Skills (if applicable) <i>(Skills learned in the course of study which can be useful and utilized in other settings)</i> <table border="1"> <tr> <td>1</td> <td>Cognitive skills</td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>3</td> <td></td> </tr> <tr> <td colspan="2">Open-ended response (if any)</td> </tr> <tr> <td>4</td> <td></td> </tr> </table>														1	Cognitive skills	2		3		Open-ended response (if any)		4																																																																																																																																																																																	
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10	Distribution of Student Learning Time (SLT) Note: This SLT calculation is designed for home grown programme only.																																																																																																																																																																																																							

Course Content Outline and Subtopics			CLO*	Learning and Teaching Activities**										Total SLT
				Face-to-Face (F2F)								NF2F Independent Learning (Asynchronous)		
				Physical				Online/ Technology-mediated (Synchronous)						
				L	T	P	O	L	T	P	O			
1	Introduction to programming		1	2									1	
2	Control Structures - Sequential , Selection and Iteration		1	8									8	
3	Data collection		1	4									4	
4	String Interpolation		1	2									2	
5	Modular Programming		1	4									4	
6	File Handling		1	2									2	
7	Introduction to Problem Solving and program design		1	2									2	
8	Program Design Techniques - Flowchart & Pseudocode		1	4									2	
9	Outline the Problem Solving Process		2		2								1	
10	Develop algorithms		2		2								2	
11	Apply problem solving technique using pseudocode and flowchart		2		6								3	
12	Create programmable solution		2		2								1	
13	Lab activity: Build a simple program		2		2								2	
14	Lab activity: Build a program using different control construct.		2		6								6	
15	Lab activity: Implement data collection		2		2								2	
16	Lab activity: Implement modular programming techniques		2		4								2	
17	Lab activity: Implement file handling		2		2								2	
18														
19														
20														
SUB-TOTAL SLT:													102	
Continous Assesment			%	Face-to-Face (F2F)								NF2F Independent Learning for Assessment (Asynchronous)		
				Physical				Online/ Technology-mediated (Synchronous)						
1	Assignment		50	0.5								11		
2														
3														
4														
5														
SUB-TOTAL SLT:													11.5	
Final Assesment			%	Face-to-Face (F2F)								NF2F Independent Learning for Assessment (Asynchronous)		
				Physical				Online/ Technology-mediated (Synchronous)						
1	Examination		50	1.5								5		
2														
3														
4														
5														
SUB-TOTAL SLT:													6.5	
SLT for Assessment:													18	
GRAND TOTAL SLT:													120	
A	[Total F2F Physical / (Total F2F Physical + Total F2F Online + Total Independent Learning) x 100]												48.33	
B	[(Total F2F Online + Total Independent Learning) / (Total F2F Physical + Total F2F Online + Total Independent Learning) x 100]												51.67	
C	[% F2F Physical Practical + % F2F Online Practical]													
C1	[Total F2F Physical Practical / (Total F2F Physical + Total F2F Online + Total Independent Learning) x 100]													
C2	[Total F2F Online Practical / (Total F2F Physical + Total F2F Online + Total Independent Learning) x 100]													
Please tick (v) if this course is Industrial Training/ Clinical Placement/ Practicum using 50% of Effective Learning Time (ELT)														
Note:														
* Indicate the CLO based on the CLO's numbering in Item 8														
** For ODL programme: Courses with mandatory practical requiremnets imposed by the programme standards or any related standards can be exempted from complying to the minimum 80% ODL delivery rule in the SLT.														
11	Identify special requirement or resources to deliver the course (e.g., software, nursery, computer lab, simulation room etc)													

12	References (include required and further readings, and should be the most current)	Bhasin, H. (2021). Python basics : a self-teaching introduction. Mercury Learning and Information. ISBN-1B07L5K5CZ Gaddis, T. (2021). Starting Out with Python. 4th Ed. Edinburg:United Kingdom, Pearson Education, Inc., ISBN-9780136912330. Guttag, J. V. (2021). Introduction to Computation and Programming Using Python. 2nd Ed. Cambridge MA, United States:MIT Press, ISBN 9780262542364
13	Other additional information (if applicable)	
Note: Number of PLO indicated is purely for illustration purposes only and the number is subjected to the curriculum design.		