UNIVERSITI TEKNOLOGI MARA
CSC116: INTRODUCTION TO COMPUTERS AND PROGRAMMING

Course Name (English)	INTRODUCTION TO COMPUTERS AND PROGRAMMING APPROVED
Course Code	CSC116

MQF Credit	3

Course Description	This course provides an overview of a computer system. Students will be introduced to the main components of a computer, as well as how data are represented and stored inside computers. Students also will be introduced with programming and the various programming paradigms. Students will also be taught the basics of writing computer programs. They will learn the basic structures that make up computer programs and how to implement those structures by writing programs in virtual world environment.

Transferable Skills	Demonstrate analytical skills using technology.

Teaching Methodologies	Lectures, Lab Work, Tutorial

CLO	CLO1 Explain the components of a computer system and the computer programming language. CLO2 Demonstrate good value and ethics through review related to computer system and the computer programming language. CLO3 Describe programming visualization in programming environment.

Pre-Requisite Courses	No course recommendations

Topics
1. Introduction to Computers and Computer System 1.1) Overview and History of Computers 1.2) Basic Components of the Von Neumann Machine 1.3) Modern Computer System and Hardware in Brief
2. Data and Data Representation 2.1) Data, Information and Processing 2.2) Bits, Bytes, and Words 2.3) ASCII Codes, Unicode
3. Computer Programs and Programming Language 3.1) Overview of Computer Program and Programming Language 3.2) Programming Language Paradigms 3.3) Programming Application Domains
4. Introduction to a Visual IDE 4.1) Objects 4.2) Classes 4.3) Composite Objects 4.4) Do together vs do in order
5. Methods and Data 5.1) Methods 5.2) Data and expressions 5.3) Parameters
6. Decisions and Loops 6.1) Making decisions 6.2) Repetition

7. Events
7.1) Introduction to event processing
7.2) World events
7.3) Keyboards events
7.4) Mouse events
7.5) Condition events

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Assignment	40%	CLO2
	Final Test	Final Test (Common Test)	30%	CLO1
	Lab Exercise	Lab Test	20%	CLO3
	Quiz	Quiz	10%	CLO1

Reading List	Reference Book Resources	• **Timothy O'Leary, Linda O'Leary, Daniel Leary 2016, *Computing Essentials 2017*, McGraw-Hill Education [ISBN: 978-125956365]**
		• **Irv Englander 2014, *The Architecture of Computer Hardware, Systems Software, and Networking: An Information Technology Approach*, 5 Ed., Wiley [ISBN: 978-111832263]**
		• **Robert Sebesta 2015, *Concepts of Programming Languages*, 11 Ed., Pearson [ISBN: 978-013394302]**
		• **Tony Gaddis 2012, *Starting Out with Alice*, 3 Ed., Pearson [ISBN: 978-013312974]**
		• **Joel Adams 2014, *Alice 3 in Action with Java*, 1 Ed., Cengage Learning [ISBN: 978-113358918]**
		• **Wanda Dann, Don Slater, Laura Paoletti, and Dave Culyba 2017, *Alice 3 to Java: Learning Creative Programming through Storytelling and Gaming*, 1 Ed., Pearson [ISBN: 978-013615674]**
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	