



UNIVERSITI TEKNOLOGI MARA

CSC119: FUNDAMENTALS OF COMPUTER SCIENCE

Course Name (English)	FUNDAMENTALS OF COMPUTER SCIENCE APPROVED
Course Code	CSC119
MQF Credit	3
Course Description	This course provides the students with an overall view on how a computer stores information, retrieves and manipulates input and output; the major components of the computer, contemporary computing and application software.
Transferable Skills	Knowledge in Specific Area – Content Practical Skills Thinking & scientific approach Critical Thinking & Problem-Solving Skills Information Management & Life Long Learning
Teaching Methodologies	Lectures, Blended Learning, Lab Work
CLO	CLO1 Describe the concept and components of computers and communication and also the data manipulation on digital circuit. CLO2 Follow the use of current business software for various application in the industry. CLO3 Analyse the concept of data representation and manipulation on digital circuit.
Pre-Requisite Courses	No course recommendations
Topics	
1. Topic 1: Introduction - part 1 1.1) Evolution of Computer, Computer components overall	
2. Topic 1: Introduction - part 2 2.1) System Unit, Input and Output devices	
3. Topic 1: Introduction - part 3 3.1) Computer software, system software and application software	
4. Topic 2: Practicalities - part 1 4.1) Communication and Networking	
5. Topic 2: Practicalities - part 2 5.1) Computer Science overall: Security, Privacy and Ethics	
6. Topic 3: Digital Logic - part 1 6.1) Gate (AND, OR, NOT), Boolean Algebra, Truth Table	
7. Topic 3: Digital Logic - part 2 7.1) Numbering System: Decimal to Binary conversion, Binary to decimal conversion, Binary addition and subtraction	
8. Topic 3: Digital Logic - part 3 8.1) Numbering System: Addition Table, Additional/Complement method, Two's complement method	
9. Topic 4: System Unit - part 1 9.1) Memory - Sticker, R-S Flip-Flop, D Flip-Flop, Master Slave Flip-Flop, Memory block, reading, storing	
10. Topic 4: System Unit - part 2 10.1) Arithmetic Logic Unit, Half Adder, Full Adder, Subtractor, ALU Design	
11. Topic 4: System Unit - part 3 11.1) Register, Operation Circuit, General, using ALU	

12. Topic 5: Programming and Control - part 1

12.1) Control circuit & Instructions

13. Topic 5: Programming and Control - part 2

13.1) Loop register and controller for controller circuit, Control network

14. Topic 6: Translation

14.1) Three letter code instructions, Identification key, Translation

15. Computer Lab Sessions

15.1) Introduction to different types of application software and hands-on experience on the following categories of application software:

15.2)

15.3) Introduction to Windows

15.4) Features and editions

15.5) Basic : Interface, part of a window, dialog box

15.6) Desktop : window Aero, taskbar, menu bar, flip 3D

15.7) Window Explorer : File & folder, searching, libraries

15.8) Customisation : Gadgets, themes

15.9) Accessories : Calculator, paint, recorder, snipping tool, system tools

15.10) Shortcut keys

15.11)

15.12) Word Processing Software

15.13) Create: open, new, and save

15.14) Edit: select, copy, cut and paste

15.15) Insert graphics

15.16) Format: paragraph formatting, word wrap, auto content, format painter, page numbering, header and footer, bullets and numbered lists and text alignment

15.17) Customizing: table and columns formatting

15.18) Tools: spelling and grammar checker

15.19) Preview and printing: properties, paging, page setup and margin

15.20)

15.21) Spreadsheet Software

15.22) Create: open, new, and save

15.23) Edit: copy, cut and paste

15.24) Format: format cell, text alignment, word wrap, merge and centre

15.25) Customizing: column width, row height, auto format

15.26) Formulas and functions: fill handle, sum, average, max, min, and arithmetic expression

15.27) Chart: chart wizard, modifying, editing and formatting

15.28) Analysis: sort and validation

15.29) Printing: properties, paging, page setup and margin

15.30)

15.31) Presentation Graphic Software

15.32) Create: blank, auto content wizard, design templates

15.33) Drawing: clip art, and insert files

15.34) Insert object: media, video, music, movies and charts, Hyperlinks

15.35) Slide effect: layouts, transition, custom animation and timing

15.36) View: Master slide, slide sorter and slide outline

15.37) Slide show tools: current slide, previous, next and go to slide

15.38) Printing: option (handout, slide and notes), properties, paging, page setup and margin

Assessment Breakdown	%
Continuous Assessment	40.00%
Final Assessment	60.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Lab Assignment 1	5%	CLO2
	Assignment	Assignment 2	5%	CLO3
	Quiz	Quiz 2: Topic 3 & Topic 4	3%	CLO3
	Quiz	Quiz 3: Topic 5 & Topic 6	3%	CLO3
	Quiz	Quiz 1: Topic 1 & Topic 2	4%	CLO1
	Test	Test 1: Topic 1,2 & 3	10%	CLO1
	Test	Test 2: Topic 4, 5 & 6	10%	CLO1

Reading List	Recommended Text	<ul style="list-style-type: none"> • Shelly Cashman 2013, <i>Enhanced Discovering Computers, Fundamentals: Your Interactive Guide to the Digital World, Course Technology</i>, Cengage Technology [ISBN: 978-113359644] • Cullen Schaffer, Haslizatul Fairuz Md Hanu 2010, <i>Introduction to Computer Science</i>, Pearson Custom Publishing
	Reference Book Resources	<ul style="list-style-type: none"> • Parsons, Oja 2013, <i>New Perspectives On Computer Concepts</i>, 15 Ed., CENGAGE Learning • Parker, Morley 2015, <i>Understanding Computers: Today and Tomorrow</i>, 15 Ed., CENGAGE Learning • Norton 2010, <i>Introduction To Computers</i>, McGraw-Hill Education
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	