



UNIVERSITI TEKNOLOGI MARA

CSC034: FUNDAMENTALS OF INFORMATION AND COMMUNICATION TECHNOLOGY

Course Name (English)	FUNDAMENTALS OF INFORMATION AND COMMUNICATION TECHNOLOGY APPROVED
Course Code	CSC034
MQF Credit	3
Course Description	This course exposes students to the fundamentals of computer and deals with general computer literacy. The course also explain the current computing trend in Industry Revolution 4.0 on managing Data, Cloud Computing and Interactive Multimedia Applications. This course also emphasizes the aspect of computer security and computing ethics. Students are expected to have hands-on experience on basic application tools.
Transferable Skills	1) Effectively use computer and technology individually as well as in a team to achieve goals. 2) Display initiative and leadership abilities. 3) Communicate information and ideas effectively.
Teaching Methodologies	Lectures, Lab Work
CLO	CLO1 Perform verbal communication skills through Information Communication Technology (ICT) project. CLO2 Display leadership skills through Information Communication Technology (ICT) projects. CLO3 Demonstrate the use of productivity software in producing information.
Pre-Requisite Courses	No course recommendations
Topics	
1. Evolution of Computer and Ubiquitous Technology 1.1) Computer Evolution 1.2) Ubiquitous technology 1.3) Technology on the world stage: Political Issues and Global issues. 1.4) Technology and Our Society: Technology Impact: How we think, how we connect and how we consume. 1.5) Technology and Life: Retail, Arts, Education, Law Enforcement, Medicine, Science and Psychology 1.6) Digital Devices and Media 1.7) Ethical Issues in IT: Digital Divide and Mobile Bridge	
2. Computer Components 2.1) Understanding Computer 2.2) Input Devices 2.3) Output Devices 2.4) Processor and Memory 2.5) Storing Data and Information 2.6) Power Controls 2.7) Ethical Issues in IT: What is Ethical Computing	
3. Application Software and System Software 3.1) Application Software 3.2) System Software: Operating System, Utility Programs and File Management 3.3) Web Resources 3.4) Mobile Devices 3.5) Tablets, Netbooks and Ultrabooks 3.6) The Digital Information Age 3.7) Ethical Issues in IT: Plagiarism and Copyright Violation 3.8) Borrowing Software without Permission 3.9) Managing Copyrights	

4. Databases and Information System

- 4.1) Database Basics
- 4.2) How Businesses Use Database
- 4.3) Business Intelligence Systems
- 4.4) Data Mining
- 4.5) Ethical Issues in IT : Data Protection

5. Networking: Connecting Computing Devices

- 5.1) How Network Function
- 5.2) Networking Fundamentals
- 5.3) Network Architecture (Basic)
- 5.4) Network Components
- 5.5) Types of Server
- 5.6) Client Server vs Peer to Peer Network
- 5.7) Client Server Network Security
- 5.8) Internet Identity : IP Addresses and Domain Name
- 5.9) Communication Over the Internet
- 5.10) Ethical Issues in IT:
- 5.11) Sharing Internet Connection with Your Neighbours: Legal? Ethical? Safe?
- 5.12) Storing File in Clouds
- 5.13) How to Handle Data Breaches?
- 5.14) Privacy Issues of Web Browsing

6. Cyber Security: Protecting Digital Data and Devices

- 6.1) Threats
- 6.2) Cybercrime and identity theft
- 6.3) Computer Viruses
- 6.4) Preventing Virus Infections
- 6.5) Understanding Hackers
- 6.6) Restricting Access to Your Digital Assets
- 6.7) Protecting Digital Property
- 6.8) Managing Online Annoyance
- 6.9) Keeping Your Data Safe
- 6.10) Social Engineering
- 6.11) Protecting Physical Computing Assets

7. Current Trends in Information Technology

- 7.1) Latest IT Trend

8. Applications Module (Computer Lab Session)

- 8.1) Introduction and hands-on experience to information searching, word processor software, presentation software and/or spreadsheet programs. The objective of this section is to inculcate students critical thinking. This involves creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
- 8.2)
- 8.3) i) Information Searching
- 8.4) • Search engine
- 8.5) • How a search engine works
- 8.6) • Types of search engine
- 8.7) • How to use search engine
- 8.8) • Keywords
- 8.9) • Advanced search and sitemap
- 8.10) • Tips and techniques for precise searching
- 8.11)
- 8.12) ii) Word Processing Software
- 8.13) • Word processor basics
- 8.14) • Creating and formatting documents
- 8.15) • Working with text
- 8.16) • Generating table of contents
- 8.17) • Working with references
- 8.18) • Working with illustrations
- 8.19) • Specialized documents
- 8.20) • Collaborate with others
- 8.21) • Alternative Word Processor software
- 8.22)
- 8.23) iii) Spreadsheet Software
- 8.24) • Spreadsheet basics
- 8.25) • Creating a spreadsheet
- 8.26) • Formatting a spreadsheet: format cell, borders, alignment, word wrap, merge and centre
- 8.27) • Customizing: column width, row height, auto format
- 8.28) • Formulas and functions: fill handle, sum, average, max, min, ,arithmetic expression, if function, count if function
- 8.29) • Analysis: chart - wizard, modifying, editing and formatting
- 8.30) • Alternative Spreadsheet software
- 8.31)
- 8.32) iv) Presentation Software
- 8.33) • Creating a presentation
- 8.34) • Modify presentation themes

- 8.35) • Working with a presentation
- 8.36) • Printing a presentation
- 8.37) • Outlining Ideas
- 8.38) • Adding and Modifying text
- 8.39) • Using a color scheme
- 8.40) • Drawing and modifying objects
- 8.41) • Inserting information to presentation software
- 8.42) • Creating a slideshow
- 8.43) • Alternative Presentation software

9. Applications Module (Presentation)

9.1) The objective of this section is to develop good communication skills among students. This is achieved through effective development, interpretation, and expression of ideas through written, oral, and visual communication with the use of presentation software.

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Total Assignment Assessment - 45% (Assignment 1 - 15% Assignment 2 - 15% Assignment 3 - 15%)	45%	CLO3
	Group Project	Group work - 45%	45%	CLO2
	Presentation	Group presentation on group project - 10%	10%	CLO1

Reading List	Recommended Text	Alan Evans, Kendall Martin, Mary Anne Poatsy 2019, <i>Technology In Action</i> , 15 Ed., 13, Pearson Education Limited United Kingdom [ISBN: 9781292311883]
	Reference Book Resources	<ul style="list-style-type: none"> • Daniel O'Leary, Linda O'Leary, Timothy O'Leary 2016, <i>Computing Essentials 2017</i>, McGraw-Hill Education [ISBN: 9781259563652] • Jennifer T. Campbell, Steven M. Freund, Mark Frydenberg, Mary Z. Last, Philip J. Pratt 2016, <i>Shelly Cashman Series Discovering Computers & Microsoft Office 365 & Office 2016: A Fundamental Combined Approach</i>, Cengage Learning [ISBN: 9781305871809] • Misty E. Vermaat, Susan L. Sebok, Steven M. Freund, Jennifer T. Campbell, Mark Frydenberg 2017, <i>Discovering Computers ©2018: Digital Technology, Data, and Devices</i>, Cengage Learning [ISBN: 9781337285100] • Emergent Learning 2015, <i>Introduction to Computers and Information Technology Student Workbook</i>, Prentice Hall [ISBN: 1323237127] • George Reynolds 2018, <i>Ethics in Information Technology</i>, 6 Ed., Cengage Learning [ISBN: 9781337405874]
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	