COURSE INFORMATION

School/Faculty:	**Faculty of Computing, UTM**		
Program name:	**Bachelor of Computer Science**		
Course code:	**SECP1513**	**Academic Session/Semester:**	**20252026/1**
Course name:	**Technology & Information System**	**Pre/co requisite (course name and code, if applicable):**	
Credit hours:	**3**		

Course synopsis	This course introduces students to the fundamental concepts, components, and applications of technology and information systems, emphasizing their role in supporting individuals, organizations, and society. The course covers key areas such as types of information systems, hardware, software, networks, and data management, along with issues in security, ethics, and digital transformation, supported by case studies and industry practices. Teaching is delivered through lectures, discussions, hands-on activities, and group projects with a strong emphasis on problem-solving, teamwork, and critical thinking. By the end of the course, students will be able to analyze and evaluate the role of information systems, apply concepts to real-world contexts, and design simple solutions that integrate technology effectively.
Course coordinator (if applicable)	**PM Dr Azurah binti A Samah**

Course lecturer(s)	**Name**	**Office**	**Contact no.**	**E-mail**
	Assoc. Prof. Dr. Azurah binti Abu Samah (01)	*N28-439-09*	*0127856650*	azurah@utm.my
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Mapping of the Course Learning Outcomes (CLO) to the Programme Learning Outcomes (PLO), Teaching & Learning (T&L) methods and Assessment methods:

No.	**CLO***	**PLO **(MQF Cluster Code)**	***Taxonomies and ****Graduate attributes**	**T&L methods**	*****Assessment methods**
CLO1	To apply knowledge in distinguishing and categorizing various types of computer component, hardware and software in real-world contexts.	PLO1 (C1)	C3 SC1	Lecture, active learning	Q, T, A, E-portfolio
CLO2	To apply knowledge in differentiating various types of information systems for practical contexts.	PLO6 (C3D)	C3 A (IT 1)	Lecture, active learning	A, PR, T
CLO3	To briefly outline the requirements and job specifications for a career in IT.	PLO9 (C4A)	A5 A (ES 2)	Lecture, active learning	A

This is the basic mapping required for the CI. Any added information is allowed (extra columns for weight or other elements) provided this is made consistent for all CI at program/school/faculty level.
*Up to 5 CLO
Refer ***Taxonomies of Learning and ****UTM's Graduate Attributes for measurement of outcomes achievement
*****T – Test; Q – Quiz; Asg – Assignment; PR – Project; Eportfolio;

****MQF Cluster Code**
C1 = Knowledge & Understanding, **C2** = Cognitive Skills, **C3A** = Practical Skills, **C3B** = Interpersonal Skills, **C3C**= Communication Skills, **C3D** = Digital Skills, **C3E** = Numercy Skills, **C3F** = Leadership, Autonomy & Responsibility, **C4A** = Personal Skills, **C4B** = Enterpreneurial Skills, **C5** = Ethics & Professionalism

Details on Innovative T&L practices:

No.	**Type**	**Implementation**
1	Active learning	Conducted through in-class activities, for example Two-Minute Paper, Think-Pair Share, Note Checking, Reflection and JIGSAW.
2	Project-based learning	Each student is required to complete design thinking project and his/her own e-portfolio. The purpose of this project is to enable students to collect all evidences of his/her learning journey over time during study in UTM. This would be a great benefit to the students when they applying jobs after graduating from the university and as a part of lifelong learning.
3	Industry visit	Industry visit is an approach of work-based learning. From industry visit, students can clearly understand the role of ICT in various types of organisations e.g. ICT as core business of organizations or ICT as a business enabler. In addition, the students can identify the requirements and job specifications for a career in ICT.
4	Industry talk	Industry talk is an approach of work-based learning. From industry talk, students can clearly understand the role of ICT in various types of organisations and current trend in industry such as IR4.0, block chain. In addition, the students can identify the requirements and job specifications for a career in ICT.
5	Computer Lab work	Students are required to assemble and reassemble computer hardware and this lab work will be done in small groups.

Transferable skills (generic skills learning in course of study which can be useful and utilised in other settings) :

Student learning time (SLT) / Effective Learning Time (ELT) details:

Week/ Meeting	**Course Content Outline and Subtopics**	**CLO* Compulsory**	**Learning and Teaching Activities**									**TOTAL SLT**
			Face-to-Face (F2F)								**Non F2F Independent Learning**	
			Physical				**Online (Synchronous)**				**Online (Asynchronous)**	**Others**
			L	**T**	**P**	**O**	**L**	**T**	**P**	**O**		
Week 1 06 Oct	Overview of: a. Course Information b. E-portfolio (LinkedIn) c. Design Thinking Project	CLO1	3									1	4
Week 2 13 Oct	Chapter 1: Emerging Technology in ICT	CLO1	3									1	4
Week 3 20 Oct *Deepavali	Chapter 2: Hardware *PC Assemble Lab, Quiz (Subject to change)*	CLO 1	3									1	4

Week 4 27 Oct	Chapter 2: Hardware *PC Assemble Lab, Quiz (Subject to change)* *Industry Visit 1 : UTMDIGITAL OPEN DAY (28 &29 Oct), Assignment 1 (Video)*	CLO 1	3									1	4
Week 5 3 Nov	Chapter 3: Software *PC Assemble Lab, Quiz (Subject to change)*	CLO1	3									1	4
Week 6 10 Nov	Chapter 3: Software	CLO1 , CLO3	3									1	4
Week 7 17 Nov	Chapter 4: Information Systems & Methodology *Industry Talk 1 , Assignment 2*	CLO1, CLO3	3									1	4
Week 8 24 Nov	SEMESTER BREAK												
Week 9 1 Dec	Chapter 5: Databases and Data Analytics	CLO1, CLO2	3									1	4
Week 10 8 Dec	Chapter 5: Databases and Data Analytics Industry Visit 2, Assignment	CLO1, CLO2	3									1	4
Week 11 15 Dec *School Hol 19 Dec	Chapter 6: Networks and Communications	CLO1, CLO2	3									1	4
Week 12 22 Dec * Christmas 24&24 Dec	Chapter 6: Networks and Communications *Industry Talk 2 , Assignment 3*	CLO1, CLO2	3									1	4
Week 13 29 Dec	Chapter 7: Privacy, Security, and Ethics Industry Visit 2, Assignment 4	CLO1, CLO3	3									1	4
Week 14 5 Jan	Chapter 7: Privacy, Security, and Ethics *Project Pitch & Report Submission*	CLO1, CLO2	3									1	4
Week 15 12 Jan	Chapter 8: Cloud Computing *Test*	CLO1 & CLO2	3									1	4
Week 16 19 Jan	Chapter 8: Cloud Computing *Eportfolio & Project Report Submission*	CLO1 & CLO2	3									1	4
											SUB-TOTAL SLT :		**60**

	Continuous Assessment	**%**	**Face-to-Face (F2F)**		**NF2F Independent Learning for Assessment**		**TOTAL SLT**
			Physical	**Online (Synchronous)**	**Online (Asynchronous)**	**Others**	
1	Assignment 1 (Format: Video)	10				8	8
2	Assignment 2 (Format: Poster)	7				7	7
3	Assignment 3 (Format: Report)	7				7	7
4	Assignment 4 (Format: Newsletter)	10				8	8
5	PC Assemble (Quiz)	6	1			1	2
6	Mid Term(Online Test) Ch1-Ch7	15	1			8	9
7	Project: Design Thinking (Low Fidelity Prototype)	15			20	9	29
					SUB-TOTAL SLT :		**70**

	Summative Assessment	**%**	**Face-to-Face (F2F)**		**NF2F Independent Learning for Assessment**		**TOTAL SLT**
			Physical	**Online (Synchronous)**	**Online (Asynchronous)**	**Others**	
1	E-portfolio (LinkedIn & GitHub)	30				20	20
					SUB-TOTAL SLT :		**20**
					SLT for Assessment:		**180**
					GRAND TOTAL SLT:		**150**

A	% SLT for F2F Physical Component	28.82
B	% SLT for Online & Independent Learning Component :	72.35
C	%SLT for Online Component:	13.33
D	% SLT for All Practical Component:	0.00
D1	% SLT for F2F Physical Practical Component:	0.00
D2	% SLT for F2F Online Practical Component:	0.00
Please tick (/) if this course is Industrial Training/ Clinical Placement/ Practicum using 50% of Effective Learning Time (ELT)		

Identify special requirement or resources to deliver the course (e.g.,software,nursery, computer lab, simulation room etc)

Computer Lab(PC Assemble)

References (include required and further readings, and should be the most current)

Rajaraman, V., & Adabala, N. (2025). Fundamentals of computers. PHI Learning Pvt. Ltd.
Unwana, T. E., Udoh, E. I., & Umoh, V. O. (2022). A Study of the Importance of Operating System (OS) in a Computer System.
Campbell-Kelly, M., Aspray, W. F., Yost, J. R., Tinn, H., & Díaz, G. C. (2023). Computer: A history of the information machine. Routledge.

Other additional information (if applicable)

Academic honesty and plagiarism: *(Below is just a sample)*

Assignments are individual tasks and NOT group activities (UNLESS EXPLICITLY INDICATED AS GROUP ACTIVITIES)
Copying of work (texts, simulation results etc.) from other students/groups or from other sources is not allowed. Brief quotations are allowed and then only if indicated as such. Existing texts should be reformulated with your own words used to explain what you have read. It is not acceptable to retype existing texts and just acknowledge the source as a reference. Be warned: students who submit copied work will obtain a mark of zero for the assignment and disciplinary steps may be taken by the Faculty. It is also unacceptable to do somebody else's work, to lend your work to them or to make your work available to them to copy.

Other additional information (if applicable)

Disclaimer:

ELT = (Theory + Industrial Guidance + Assessment) x 50%

Total of credit for LI/Practical = ELT/40 Notional Hours

Note: For ODL Programme : Courses with mandatory practical requirement imposed by programme standards or any related standards can be exempted from complying to the minimum 80% ODL delivery rule in the SLT.

Prepared by:		**Certified by:**
Name:	PM Dr Azurah binti A Samah	**Name:**
Signature:		**Signature:**
Date:	3rd Oct 2025	**Date:**