COURSE OUTLINE

Department/ Faculty:	Information Systems/Computing	**Page:**	1 of 6	
Course code:	SECP 1513	**Academic Session/Semester:**		20212022/1
Course name:	Technology and Information Systems	**Pre/co requisite (course name and code, if applicable):**		-
Credit hours:	3			

Course synopsis	As a primer subject, this course will introduce students to information systems and technology (IS/IT) and the emerging trends of IS/IT, as well as its uses in daily life both at home and at work. Various aspects of IS/IT encompassing hardware, software, network, communications, internet, multimedia, graphics, systems applications, 4IR, cloud computing and data analytics will be introduced. Students will be equipped with basic skills in setting up and handling cloud server via practical work in the virtual guided lab, which shall comprise a major part of the study. At the end of the course, student should be able to distinguish basic IS/IT component and applications.			
Course lecturer(s)	**Names**	**Office**	**Tel (07-55)**	**E-mail (@utm.my)**
	Dr Azurah A Samah (P) (01)	N28	0127856650	azurah@utm.my
	Dr Izyan Izzati Kamsani (02 and 08))			
	PM Dr Mohd Shahizan Othman (03)			
	Mr Hairudin Abdul Majid (04 and 07)	**N28 – AIBIG LAB**	**0127846650**	**hairudin@utm.my**
	Ts Dr Sarina Sulaiman (05)			
	Dr Nor Azizah Sa'adon (06)			
	Dr Layla Rasheed Abdallah Hasan (09)			
	Dr Naghmeh Niknejad (10)			
	Dr Muhammad Iqbal Tariq (11)			

Mapping of the Course Learning Outcomes (CLO) to the Programme Learning Outcomes (PLO), Teaching & Learning (T&L) methods and Assessment methods:

No.	CLO	PLO (ICGPA CODE)	*Taxonomies and **generic skills	T&L methods	***Assessment methods
CLO1	To demonstrate the creation of server account and use of cloud computing software	PLO1 (KW)	C3 (Apply)	Lecture, Virtual Lab, Industry Talk	Assignment, Quiz, Test, Individual Project
CLO2	To differentiate different types of information systems and the lifecycle of information systems.	PLO1 (KW)	C4	Lecture, active learning Industry Talk	Assignment, Quiz, Test, Group "Project-based"
CLO3	To adapt the requirements and job specification in brief for a career in IT.	PLO8 (AD) Adaptability (Graduate Attribute) with Generic Skills	AD2 Ability to recognize potential for improvement	Lecture, Industry Talk	Assignment
Refer *Taxonomies of Learning and **UTM's Graduate Attributes, where applicable for measurement of outcomes achievement					

Updated by:		Certified by:	
Name:	Dr Azurah binti A Samah (Course Owner)	Name:	PM. Dr. Roliana Ibrahim (Head of Department)
Signature:		Signature:	
Date:	12 September 2021	Date:	

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***T - Test; IP - Individual Project; A – Assignment; PL - Public Lecture Report; IV - Industry Visit Report.

Details on Innovative T&L practices:

	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	Students are assign in group to produce a low-fidelity prototype (of specific module) to get exposure on application development of specific platform which will assist the student to understand and differentiate types and life cycle of information system. The low-fidelity prototype refers to development of Programming interface of specific module with basic CRUD (Create-Read-Updae-Delete) functionalities.
3.	Industry talk	Industry talk is an approach of work-based learning and be a part of NALI (New Academic Innovative Learning). From industry talk, students can clearly understand the role of ICT in various types of organisations and exposed to emerging trends in Information System and Technology. In addition, the students can identify job on demand in ICT.
4.	Virtual and Guided Lab work	Students are required to create server account and use cloud computing software, then report the activities of the lab work and all his/her learning journey of this subject in e-portfolio that can be accessed through student portal developed by CICT 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.

Weekly Schedule:

Week 1 **2021 Oct 17**	**-Overview of Course** **-Briefing on e-portfolio, AWS and Project on Low fidelity prototype**	
Week 2 **Oct 24**	**CHAPTER 1**: Overview of Technology and Information Systems (People, Software, Hardware, Data, connectivity) **CHAPTER 2**: The Internet, The Web and Electronic Commerce **CHAPTER 3**: Basic Application Software and Specialized Application Software EMERGING TRENDS : 4th Industrial Revolutions	**Release:** **- Asg 1,** **- e-portfolio (https://eportfolio.utm.my)** **- Low fidelity prototype (Part 1)**
Week 3 **Oct 31**	**Industry Talk (1) – [1 Nov] [TIS and 4IR (TM)** **Industry Talk (2) – [2 Nov] TIS AND 4IR by Dr Sarah Khadijah Taylor (CYBERSECURITY)**	
Week 4 **Nov 7**	**CHAPTER 4**: System Software **CHAPTER 5**: The System Unit **CHAPTER 6**: Input and Output **CHAPTER 7**: Secondary Storage	**Due: Asg 1 (8%)** **Release: Asg 2**
Week 5 **Nov 14**	**Industry Talk (3) – [15 Nov] Hyper-Converged System (HCI) & Storage Virtualization (Sanfor Technologies)**	**Quiz 1 on Chap 1 – 7 (5%)**

	Industry Talk (4) – [18 Nov] Augmented Reality by Dr Ruzimi Mohamed (IMICREATIVE Sdn Bhd)	
Week 6 **Nov 21**	**CHAPTER 8**: Communications **CHAPTER 9**: Privacy and Security EMERGING TRENDS: THE CLOUD COMPUTING	**Due: Asg 2 (8%)** **Release: Asg 3**
Week 7 **Nov 28**	**Industry Talk (5) – [29 Nov] Emerging Technology on Network Infrastructure (Juniper Network)** **Industry Talk (6) – [2 Dec] 5G, wifi6 and emerging network Technologies (HUAWEI)**	**Due : Project on low fidelity prototype (part 1) 5%** **Release : Low fidelity prototype (Part 2)**
Week 8 Dec 5-9	MID TERM BREAK	Due: Asg 3 (8%)
Week 9 **Dec 12**	Mid-Term Test (12/12/2021) **CHAPTER 10**: Information Systems **CHAPTER 11**: Databases **CHAPTER 12**: Systems Analysis and Design **CHAPTER 13**: Programming and Languages EMERGING TRENDS : DATA-ANALYTICS	Mid Term Test (20%) Release: Asg 4
Week 10 **Dec 19**	**Industry Talk (7) – [20 Dec] Mobile Apps UTMSmart by Mr Azmi Khamis (CICT)** **Industry Talk (8) – [23 Dec] Power BI**	
Week 11 **Dec 26**	**Industry Talk (9) – [27 Dec 2022] AWS by Dr Qusay Al-Maatouk (Asia Pacific University)**	**Due: Asg 4 (8%)** **Release: AWS**
Week 12 **2022 Jan 2**	**Discussion on** Project of "Low Fidelity Prototype"	**Quiz 2 on Chap 10, 11, 12, 13 (5%)**
Week 13 **Jan 9**	AWS	
Week 14 **Jan 16**	AWS	**Due: AWS badge (10%)**
Week 15 **Jan 23**	Project Presentation (Low fidelity prototype)	Due: E-portfolio (8%) Due: low fidelity prototype (15%)

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

Team working
Writing technical report
Reflection report
AWS cloud computing

Effective learning time (ELT) details:

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Distribution of student Learning Time (SLT) Course content outline	Guided Learning (Face to Face)				Teaching and Learning Activities		TOTAL ELT
					Guided Learning Non-Face to Face	Independent Learning Non-Face to face	
CLO	**Lecture**	**Tutorial**	**Practical (Guided Lab)**	**Others**			
CLO 1	8h	0	9h		7	16	**40**
CLO 2	11h	0			17	35	**63**
CLO 3	11h	0			11	22	**44**
Total ELT	**30h**		**9h**		**35**	**73**	**147 h**

Continuous Assessment		PLO	Percentage	Total ELT
1	Assignment #1 (4IR)	KW	8	As in CLO
	Assignment #2 (Cloud Computing Technology)	KW	8	As in CLO
	Assignment #3 (Infrastructure of Cloud Computing)	KW	8	As in CLO
	Assignment #4 (Data Analytics)	KW	8	As in CLO
2	Quiz 1	KW	5	**30 min**
3	Quiz 2	KW	5	**30 min**
4	Test (Chapter 1 – 9)	KW	20	**2h**
5	Individual Project (e-portfolio and AWS	AD	18	As in CLO
6	Group Project (Low fidelity prototype)	AD	20	As in CLO
Grand Total ELT				**150h**

Special requirement to deliver the course (e.g: software, nursery, computer lab, simulation room):

Amazon Web Service Windows 10, Adobe Photoshop, Movie Maker, e-portfolio UTM student portal, UTM e-learning, GoogleMeet, Webex

Learning resources:

Text book (if applicable)

O'Leary et. al (2017), "Computing Essentials 2017 - 26th Edition", McGraw Hill

Main references

Misty E. Vermaat et. al (2017), "Enhanced Discovering Computers ©2017", Course Technology

Joseph Valacich & Christoph Schneider (2015), "Information Systems Today: Managing in the Digital World (7th Edition) 7th Edition", Pearson

Additional references

Misty E. Vermaat et. al (2016), "Shelly Cashman Series Microsoft Office 365 & Office 2016: Introductory 1st Edition", Course Technology

Online

http://elearning.utm.my

Academic honesty and plagiarism:

Copying of work (texts, lab 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 exams 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 (Course policy, any specific instruction etc.):

1. Attendance is compulsory and will be taken in every lecture session. Student with less than 80% of total attendance is not allowed to sit for final exam.
2. Students are required to behave and follow the University's dressing regulation and etiquette all the time.
3. Exercises and tutorial will be given in class and some may be taken for assessment. Students who do not do the exercise will lose the coursework marks for the exercise.
4. Assignments must be submitted on the due dates. Some points will be deducted for late submissions. Assignments submitted three days after the due date will not be accepted.
5. Make up exam will not be given, except to students who are sick and submit medical certificate confirmed by UTM panel doctors. Make up exam can only be given within one week of the initial date of exam.

Assessment	PLO1 (KW)	PLO1 (KW)	PLO8 (AD2)	Total (%)
	C01	C02	CO3	
Assignment #1	2	4	2	8
Assignment #2	2	4	2	8
Assignment #3	2	4	2	8
Assignment #4	2	4	2	8
MidTerm Exam	-	10	10	20
Quiz 1	1	3	1	5
Quiz 2	3	1	1	5
Individual Project -Content of AWS in e-portfolio (5%) - Badge (10%), e-portfolio (3%)	15	3	-	18
Grouped Project - Report Part 1 (5%), Report Part 2 (15%)		10	10	20
TOTAL PLO	27	43	30	100

Disclaimer: