

Subject Description Form

Subject Code	ENG2003
Subject Title	Information Technology
Credit Value	3
Level	2
Pre-requisite / Co-requisite/ Exclusion	Nil
Objectives	To provide the foundation knowledge in internet applications, computer networks, and database management that is essential to modern information system design
Intended Subject Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <p><u>Category A: Professional/academic knowledge and skills</u></p> <ol style="list-style-type: none"> 1. Understand the functions and features of modern computing systems. 2. Understand the client-server architecture and be able to set up multiple internet applications. 3. Understand the principles of computer networks and be able to set up simple computer networks. 4. Understand the basic structure of a database system and be able to set up a simple database system. <p><u>Category B: Attributes for all-roundedness</u></p> <ol style="list-style-type: none"> 1. Solve problems using systematic approaches.
Subject Synopsis/ Indicative Syllabus	<p>Syllabus:</p> <ol style="list-style-type: none"> 1. <u>Introduction to computers</u> Introduction to information technology using Internet of Things as a real life example. Introduction to modern computing systems. 2. <u>Computer Networks</u> Introduction to computer networks (Client-Server Architecture). Study different internet applications (HTTP/FTP/DNS). Explain basic concepts on packet routing (Data Encapsulation/IP Addressing/Functions of Routers). Introduction to basic network security measures. 3. <u>Introduction to data processing and information systems</u> Database systems – architecture, relational database concept, structural query language (SQL), database management systems, Web and database linking, database application development. Introduction to Information systems. Workflow management. Case study: Database design, implementation and management.
Teaching/Learning Methodology	There will be a mix of lectures, tutorials, and laboratory sessions/workshops to facilitate effective learning. Students will be given case studies to understand and practice the usage of modern information systems.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)				
			A1	A2	A3	A4	B1
	1. Quizzes (in tutorials)	3%	√	√	√		√
	2. Quizzes (in lectures)	14%	√	√	√	√	√
	3. Workshops	14%	√	√	√	√	√
	4. Mid-term Test	11%	√	√	√		√
	5. Assignment	8%				√	√
	6. Examination	50%	√	√	√	√	√
Total	100 %						
<p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>The assessment methods include an end-of-subject 2-hour written examination (total 50%) and other assessment methods (total 50%), including quizzes, a mid-term test, workshops, and an assignment, which cover intended subject learning outcomes A1, A2, A3, A4, and B1.</p>							
Student Study Effort Expected	Class contact:						
	<ul style="list-style-type: none"> Lectures (18), tutorials (6), and workshops (15) 					39 Hours	
	Other student study effort:						
	<ul style="list-style-type: none"> Workshops preparation (6/workshop) 					30 Hours	
	<ul style="list-style-type: none"> Self study (3/week) 					39 Hours	
Total student study effort						108 Hours	
Reading List and References	<ol style="list-style-type: none"> B. Williams and S. Sawyer, <i>Using Information Technology: A Practical Introduction to Computers and Communications</i>, 11th ed., McGraw-Hill, 2014. J. F. Kurose and K. W. Ross, <i>Computer Networking: A Top-Down Approach</i>, 7th ed., Pearson, 2016. D. E. Comer, <i>Computer Networks and Internets</i>, 6th ed., Pearson, 2015. B. A. Forouzan, <i>TCP/IP Protocol Suite</i>, 4th ed., Tmh, 2010. W. Stalling, <i>Data and Computer Communications</i>, 10th ed., Pearson, 2013. S. Morris and C. Coronel, <i>Database Systems: Design, Implementation, and Management</i>, 11th Edition, Course Technology, 2014. M. Mannino, <i>Database Design, Application Development, & Administration</i>. 6th ed., Chicago Business Press, 2014. 						

(revised) July 2018