

Subject Description Form

Subject Code	COMP100
Subject Title	Introduction to Information Technology
Credit Value	3
Level	1
Pre-requisite / Co-requisite/ Exclusion	Nil
Objectives	<p>This subject provides students with the basic concepts of information technology and computing, as well as knowledge and practice on deploying and controlling common information technology applications. This subject is suitable for all students as a first subject in information technology, whether they intend to continue to study information technology or not. Students who intend to study information technology-related programmes are strongly recommended to take both COMP100 and COMP111.</p>
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a) understand how a computer works; b) understand the potentials of information technologies in business and industry; c) use popular operating systems to carry out sequence of tasks; d) appreciate the power of programmed computer operation; e) understand the current trends in the development of popular information technologies such as the Internet and related tools; f) appreciate IT-related intellectual property issues and their protection. <p>Alignment of Programme Outcomes:</p> <p>Program Outcome 1: This subject contributes to having students practice their writing skills with project document and report writing, as well as project presentation.</p> <p>Program Outcome 2: This subject contributes to developing a global outlook at various factors that affects the performance and function of a computing system.</p> <p>Program Outcome 4: This subject contributes to developing student critical thinking through tutorial and lab exercises on solving problems. They will also practice more in written assignments, programming exercises, and project.</p> <p>Program Outcome 7: This subject contributes to team work with group-based project for students to practice team spirit.</p>
Subject Synopsis/ Indicative Syllabus	<ol style="list-style-type: none"> 1. Introduction to Computer Systems Major components of computer systems: central processing units, storage devices and media, inputs / outputs; working principle of computers; contemporary types of CPU, memory, input / output devices currently in use. 2. System Software Functions and operations of system software; basic features and commands of MS Windows and Unix / Linux; script language and task control. Open source software like Ubuntu OS, OpenOffice, Octave. 3. Communication, Multimedia and the Internet

	<p>Communication and networking; Internet resources and tools; multimedia information creation and application.</p> <p>4. IT Applications Introduce typical applications of information technologies such as office automation, knowledge management, education, entertainment, digital edutainment, manufacturing, geo-informatics, bio-informatics, etc.</p> <p>5. Inside IT Applications Role of programming in IT applications, e.g. shell programs, macros in Excel, robotic control, concept of algorithm and programming, debugging.</p> <p>6. IT Intellectual Property Security, privacy and ethics with software; copyright and patent law; trade secrets and registered design.</p>																																																																					
Teaching/Learning Methodology	<p>The course material will be delivered as a combination of mass lectures and small group supervised laboratory sessions. Students will get familiarized with common operating systems and environment, internet and multimedia tools. Open source software solutions like Ubuntu, OpenOffice and Octave as replacement of Windows, MS Office and Matlab will also be introduced. They will also attempt simple script, shell programs etc and appreciate exercising automatic control over the computer and applications.</p>																																																																					
Assessment Methods in Alignment with Intended Learning Outcomes	<table border="1" data-bbox="443 954 1474 1532"> <thead> <tr> <th data-bbox="443 954 770 1122" rowspan="2">Specific assessment methods/tasks</th> <th data-bbox="770 954 927 1122" rowspan="2">% weighting</th> <th colspan="6" data-bbox="927 954 1474 1055">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th data-bbox="927 1055 1018 1122">a</th> <th data-bbox="1018 1055 1109 1122">b</th> <th data-bbox="1109 1055 1200 1122">c</th> <th data-bbox="1200 1055 1291 1122">d</th> <th data-bbox="1291 1055 1382 1122">e</th> <th data-bbox="1382 1055 1474 1122">f</th> </tr> </thead> <tbody> <tr> <td data-bbox="443 1122 770 1189">1. Assignments</td> <td data-bbox="770 1122 927 1189">25%</td> <td data-bbox="927 1122 1018 1189">✓</td> <td data-bbox="1018 1122 1109 1189">✓</td> <td data-bbox="1109 1122 1200 1189">✓</td> <td data-bbox="1200 1122 1291 1189">✓</td> <td data-bbox="1291 1122 1382 1189">✓</td> <td data-bbox="1382 1122 1474 1189"></td> </tr> <tr> <td data-bbox="443 1189 770 1256">2. Lab exercises</td> <td data-bbox="770 1189 927 1256">45%</td> <td data-bbox="927 1189 1018 1256">✓</td> <td data-bbox="1018 1189 1109 1256">✓</td> <td data-bbox="1109 1189 1200 1256">✓</td> <td data-bbox="1200 1189 1291 1256">✓</td> <td data-bbox="1291 1189 1382 1256">✓</td> <td data-bbox="1382 1189 1474 1256"></td> </tr> <tr> <td data-bbox="443 1256 770 1323">3. Project</td> <td data-bbox="770 1256 927 1323">30%</td> <td data-bbox="927 1256 1018 1323">✓</td> <td data-bbox="1018 1256 1109 1323">✓</td> <td data-bbox="1109 1256 1200 1323">✓</td> <td data-bbox="1200 1256 1291 1323">✓</td> <td data-bbox="1291 1256 1382 1323">✓</td> <td data-bbox="1382 1256 1474 1323">✓</td> </tr> <tr> <td data-bbox="443 1323 770 1391">4. Mid-term</td> <td data-bbox="770 1323 927 1391"></td> <td data-bbox="927 1323 1018 1391"></td> <td data-bbox="1018 1323 1109 1391"></td> <td data-bbox="1109 1323 1200 1391"></td> <td data-bbox="1200 1323 1291 1391"></td> <td data-bbox="1291 1323 1382 1391"></td> <td data-bbox="1382 1323 1474 1391"></td> </tr> <tr> <td data-bbox="443 1391 770 1458">5. Examination</td> <td data-bbox="770 1391 927 1458"></td> <td data-bbox="927 1391 1018 1458"></td> <td data-bbox="1018 1391 1109 1458"></td> <td data-bbox="1109 1391 1200 1458"></td> <td data-bbox="1200 1391 1291 1458"></td> <td data-bbox="1291 1391 1382 1458"></td> <td data-bbox="1382 1391 1474 1458"></td> </tr> <tr> <td data-bbox="443 1458 770 1532">Total</td> <td data-bbox="770 1458 927 1532">100 %</td> <td colspan="6" data-bbox="927 1458 1474 1532"></td> </tr> </tbody> </table>								Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e	f	1. Assignments	25%	✓	✓	✓	✓	✓		2. Lab exercises	45%	✓	✓	✓	✓	✓		3. Project	30%	✓	✓	✓	✓	✓	✓	4. Mid-term								5. Examination								Total	100 %						
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Reading List and References	Reference Books:																																																																					

Shelly, G.B., Cashman, T.J. and Vermaat, M., Discovering Computers 2006, A Gateway to Information. Thomson Course Technology, 2005.

Shelly, G.B., Cashman, T.J. and Vermaat, M., Office 2003 Introductory Concepts and Techniques (Course One), Thomson Course Technology, 2004.

Shelly, G.B., Cashman, T.J. and Vermaat, M., Office 2003 Advanced Concepts and Techniques (Course Two), Thomson Course Technology, 2004.

E. Siever et. Al, Linux in a Nut Shell, 3rd edition, 2000.