Subject Description Form

Subject Code	COMP1901
Subject Title	Seminars and Topics in Information Technology
Credit Value	3
Level	1
Pre-requisite / Co-requisite / Exclusion	Nil
Objectives	The objectives of this subject are to: • educate and inspire the students about different aspects of Information Technology and its applications; • cultivate students' global outlook through the local and international social impact of Information Technology; • cultivate and develop students' creative thinking, computational problem-solving and logical reasoning skills; • educate students on different aspects of entrepreneurship and the process of creating new ventures in the information technology industry; and • engage the students in desirable forms of learning in university, including self-regulation, autonomous learning and deep understanding.
Intended Learning Outcomes	Upon completion of subject, students will be able to: (a) demonstrate an understanding and enthusiasm of the different types of computing disciplines; (b) develop problem-solving skills and apply basic computational thinking skills to solving simple problems; (c) understand business models, aspects and the role of entrepreneurship in the computing industry; (d) search for information, formulate a project plan, and manage a project with initiative; and (e) be aware of the University's expectations for honest academic behaviors and to understand the importance of academic integrity, including definitions and good practices by which to stay clear of dishonest behaviors and academic plagiarism.
Subject Synopsis/ Indicative Syllabus	***Online Tutorial on Academic Integrity*** Students are required to complete successfully an **Online Tutorial on Academic Integrity** on or before week 5 of the first semester. The students will understand the importance of academic integrity by completing the Online Tutorial.

	Seminars Seminars will be delivered by professors, alumni and/or reputable professionals in computing. They are designed to educate students about computing, in particular about the different areas covered by the streams of study in the Department. The objective is to arouse their interest in computing, cultivate their sense of belonging to the profession, and educate them about their study options within the Department. ***Projects*** Based on the **CARE** (**C**omputing for **A**pplication, **R**esearch and **E**ntrepreneurship) model/philosophy, students will carry out three computing-related projects with application, research and/or entrepreneurship elements. The projects are designed to develop students' creativity, problem-solving skills and/or team-work abilities through learning and practicing basic concepts in computing. For example, students will work in small groups to investigate computing problems, to develop computing systems/applications and to create business ideas/models with IT elements.
Teaching/ Learning Methodology	***Online Tutorial on Academic Integrity*** The **Online Tutorial on Academic Integrity** (OTAI) is developed by the University to help the students understand the importance of academic integrity. By going through the OTAI, students will be aware of the importance of upholding academic integrity during University study. They will also learn about proper citation and referencing methods to avoid plagiarism, and the various supports that are available in the University. Completing the OTAI is a completion requirement of COMP1901. For successful completion of the OTAI, the students need to attempt the pre-test in the OTAI, read all four modules in the OTAI, obtain at least 75% in the post-test in the OTAI and sign the Honour Declaration before the completion deadline. Students who fail to complete the OTAI before the completion deadline will fail COMP1901. ***Seminars*** The seminars are designed to arouse students' interests about the computing/engineering disciplines and industries. The mode of delivery will be interactive and engaging. Students will be motivated to search for information and do background reading. They will be encouraged to raise questions and discuss with the presenters. Assessment will consist of quiz(zes) and/or individual assignment(s) that are designed to enhance their computing/engineering knowledge, to measure students' learning outcomes as well as to encourage participation and interaction. ***Projects*** Project-based learning will be used for students to explore/learn different aspects of computing (e.g., to facilitate them to make programme choices). For example, students will carry out two technical projects (e.g., one system/application-oriented project and one data-oriented project) as well as one entrepreneurship project. One of the technical projects can be an individual project. The technical projects are intended to teach students to investigate computing problems and to apply computing knowledge. Lectures and workshops will be held to teach the concepts, and students will then work in groups or individually to propose, design and develop a project that is designed to

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<tr><td></td><td>apply and practice the concepts learned. For group projects, students will be given opportunities to interact closely with staff and other students, and to develop their problem-solving, teamwork and interpersonal skills. Assessment components will consist of demonstration, code inspection, presentation and/or reports. The entrepreneurship project is a group project, which is intended to develop students' appreciation and understanding about entrepreneurship and the commercialization process for selected information technology topic(s). Students will form a virtual startup to apply and practice the entrepreneurship concepts with the application of different IT disciplines. Assessment will focus towards students' understanding about entrepreneurship, innovation and creativity, in the form of report and/or presentation.

In general, appropriate pedagogies will also be used to promote the "Learning to Learn" ability of students (e.g., related to open educational resources).

Note: To widen student exposures and to complement other learning activities, a visit or field trip may be organized (e.g., international study tour or local company visit).</td></tr>
<tr><td>Assessment Methods in Alignment with Intended Learning Outcomes</td><td>Students' performance in this subject will be assessed by using a letter-grading system in accordance with the University's convention from grade F (failure) to A+. The relative weights of the different assessment components are as follows:
<table>
<tr><td rowspan="2">Specific assessment methods/tasks</td><td rowspan="2">% weighting</td><td colspan="5">Intended subject learning outcomes to be assessed</td></tr>
<tr><td>a</td><td>b</td><td>c</td><td>d</td><td>e</td></tr>
<tr><td>Online Tutorial on Academic Integrity</td><td>0%</td><td></td><td></td><td></td><td></td><td>✓</td></tr>
<tr><td>Seminars
Quiz(zes) / Individual Assignment(s)</td><td>10%</td><td>✓</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Projects</td><td>90%</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td></td></tr>
<tr><td>Total</td><td>100%</td><td colspan="5"></td></tr>
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Explanation of the use of the different assessment methods in assessing the intended learning outcomes:

Quiz(zes) / individual assignment(s) is/are intended to test the students' understanding of the concepts covered in the seminars as well as related computing knowledge. Through projects, students can demonstrate their creativity, problem-solving, logical reasoning and interpersonal skills. They can also demonstrate their ability to search for information, formulate a project plan, and to manage a project with initiative. Through business proposals/plans, students can demonstrate their understanding about entrepreneurship. Note that student participation may also be evaluated (e.g., with a participation grade).

In order to pass this subject, students must obtain a Grade D or above for total marks in the seminars and projects components, <u>and</u> passed the online tutorial on academic integrity on or before Week 5 of the first semester.</td></tr>
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Student Study Effort Expected	Class Contact:	
	Seminars	6 Hrs.
	Projects (average 10 hours per project)	30 Hrs.
	Other student study effort:	
	Online tutorial on academic integrity, self-study, information search, meetings and discussions, assignments, projects, etc.	69 Hrs.
	Total student study effort	105 Hrs.
Reading List and References	**Reference Books:** 1. H. Scott Fogler and Steven E. LeBlanc, *Strategies for Creative Problem Solving*, Prentice Hall, Third Edition, 2014. 2. Timothy J. O'Leary, Linda I. O'Leary, and Daniel A. O'Leary. *Computing Essentials: Making IT Work for You*, Complete 2015, McGraw Hill, 2015. 3. David Wolber, Hal Abelson, Ellen Spertus and Liz Looney, *App Inventor 2: Create Your Own Android Apps*, O'Reilly, Second Edition, 2014. 4. Lakshmi Prayaga, Jeffrey Hawthorne, and Alex Whiteside, *Android App Inventor for the Absolute Beginner*, Cengage Learning PTR, 2014. 5. Tyler, Jason, *App Inventor for Android: Build Your Own Apps - No Experience Required!*, Wiley, 2011. 6. K. Allen, *Entrepreneurship for Scientists and Engineers*, Prentice Hall, 2010.	