

Subject Description Form

Subject Code	COMP4913
Subject Title	Capstone Project
Credit Value	6
Level	4
Pre-requisite / Co-requisite / Exclusion	Exclusion: Any other equivalent capstone project
Objectives	<p>The objectives of this subject are to:</p> <ol style="list-style-type: none"> 1. provide a student the opportunities to apply and integrate his/her knowledge acquired throughout the undergraduate study; 2. develop the capabilities of a student in analysing and solving complex and possibly real-life problems; and 3. train students with skills on systematic development and documentation of a significant piece of work.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <p><i>Professional/academic knowledge and skills</i></p> <ol style="list-style-type: none"> (a) conduct literature survey to locate for materials and sources relevant to the selected problem area; (b) understand the materials obtained and connect the materials with the problem to be solved; (c) define and specify the problem precisely; (d) assimilate and apply the knowledge learnt in generating good solutions to the problem; (e) think critically the formulation of alternative models and solutions to the problem, in the analysis of approaches to the solution and their implementation; (f) evaluate the final outcome in an objective manner; <p><i>Attributes for all-roundedness</i></p> <ol style="list-style-type: none"> (g) improve presentation and communicate skills via oral presentation; (h) enhance technical report writing skills with proper organisation of materials; (i) develop the ability to learn independently and to find/integrate information from different sources required in solving real-life problems; (j) manage the project efficiently and effectively through the supervision of supervisor(s); and

	(k) work collaboratively with related parties (e.g. vendors, sponsor company, technical support staff, team-partners, research students, etc.).																																																		
Subject Synopsis/ Indicative Syllabus	<table border="1" data-bbox="384 304 1465 725"> <tr> <td data-bbox="384 304 1465 371">1. In-depth Study of a Topic Typically Proposed by the Supervisor</td> </tr> <tr> <td data-bbox="384 371 1465 439">2. Project Meeting and Planning</td> </tr> <tr> <td data-bbox="384 439 1465 506">3. Proposal Writing</td> </tr> <tr> <td data-bbox="384 506 1465 573">4. Regular Progress Checking and Reporting</td> </tr> <tr> <td data-bbox="384 573 1465 640">5. Project Documentation</td> </tr> <tr> <td data-bbox="384 640 1465 725">6. Presentation and Demonstration</td> </tr> </table> <p data-bbox="384 741 1465 965">Capstone Projects are normally proposed by academic staff of the department or in conjunction with external organisations or other departments in the university. However, students may propose a topic along an area of their interest contingent upon the condition that they could find an interested academic staff to supervise the project. Each student will be assigned a supervisor who is in charge of the entire project.</p>	1. In-depth Study of a Topic Typically Proposed by the Supervisor	2. Project Meeting and Planning	3. Proposal Writing	4. Regular Progress Checking and Reporting	5. Project Documentation	6. Presentation and Demonstration																																												
1. In-depth Study of a Topic Typically Proposed by the Supervisor																																																			
2. Project Meeting and Planning																																																			
3. Proposal Writing																																																			
4. Regular Progress Checking and Reporting																																																			
5. Project Documentation																																																			
6. Presentation and Demonstration																																																			
Teaching/ Learning Methodology	<p data-bbox="384 999 1465 1144">The capstone project spans across the academic year for two consecutive semesters. The teaching/learning activities include regular project meetings with the supervisor and/or other involved parties, guided study of project materials, independent project development work and other project management tasks.</p>																																																		
Assessment Methods in Alignment with Intended Learning Outcomes	<table border="1" data-bbox="384 1178 1465 1496"> <thead> <tr> <th data-bbox="384 1178 608 1317" rowspan="2">Specific assessment methods/tasks</th> <th data-bbox="608 1178 762 1317" rowspan="2">% weighting</th> <th colspan="11" data-bbox="762 1178 1465 1234">Intended subject learning outcomes to be assessed</th> </tr> <tr> <th data-bbox="762 1234 826 1317">a</th> <th data-bbox="826 1234 890 1317">b</th> <th data-bbox="890 1234 954 1317">c</th> <th data-bbox="954 1234 1018 1317">d</th> <th data-bbox="1018 1234 1082 1317">e</th> <th data-bbox="1082 1234 1145 1317">f</th> <th data-bbox="1145 1234 1209 1317">g</th> <th data-bbox="1209 1234 1273 1317">h</th> <th data-bbox="1273 1234 1337 1317">i</th> <th data-bbox="1337 1234 1401 1317">j</th> <th data-bbox="1401 1234 1465 1317">k</th> </tr> </thead> <tbody> <tr> <td data-bbox="384 1317 608 1429">Continuous Assessment</td> <td data-bbox="608 1317 762 1429">100%</td> <td data-bbox="762 1317 826 1429">✓</td> <td data-bbox="826 1317 890 1429">✓</td> <td data-bbox="890 1317 954 1429">✓</td> <td data-bbox="954 1317 1018 1429">✓</td> <td data-bbox="1018 1317 1082 1429">✓</td> <td data-bbox="1082 1317 1145 1429">✓</td> <td data-bbox="1145 1317 1209 1429">✓</td> <td data-bbox="1209 1317 1273 1429">✓</td> <td data-bbox="1273 1317 1337 1429">✓</td> <td data-bbox="1337 1317 1401 1429">✓</td> <td data-bbox="1401 1317 1465 1429">✓</td> </tr> <tr> <td data-bbox="384 1429 608 1496">Total</td> <td data-bbox="608 1429 762 1496">100 %</td> <td colspan="11" data-bbox="762 1429 1465 1496"></td> </tr> </tbody> </table> <p data-bbox="384 1518 1465 1585"><u>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</u></p> <p data-bbox="384 1615 1465 1760">The capstone project will be assessed by the supervisor and other assessors. Attributes to be assessed include, but not limited to, Problem Identification, Problem Solving, Communication and Presentation, Project Management, and Self-Discipline.</p> <p data-bbox="384 1794 1465 2040">Capstone Projects should be problem-oriented and there is no restriction to the nature of the problem except that it should be relevant to the student's study programme. The project could be practical, academic or a hybrid in which the student is encouraged but not constrained to have some original contributions. Each student has to submit a proposal, a mid-term checkpoint progress report and a final report. The proposal must be approved by the supervisor before the student can proceed to the capstone project. An oral presentation and demonstration is essential at the end of the</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed											a	b	c	d	e	f	g	h	i	j	k	Continuous Assessment	100%	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Total	100 %											
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed																																															
		a	b	c	d	e	f	g	h	i	j	k																																							
Continuous Assessment	100%	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																																							
Total	100 %																																																		

	project. A mid-term presentation and demonstration may also be required for proper continuous assessment.	
Student Study Effort Expected	Class contact:	
	▪ Lectures	0 Hrs.
	Other student study effort:	
	▪ Searching and reading materials, meeting with supervisor / others, design and system development, testing, documentation, presentation, etc.	210 Hrs.
	Total student study effort	210 Hrs.
Reading List and References	Reference Books: <ol style="list-style-type: none"> 1. Kumar, Ranjit, <i>Research Methodology: A Step-by-step Guide for Beginners</i>, 3rd Edition, SAGE Publications, 2011. 2. Burns, Robert B., <i>Introduction to Research Methods</i>, 4th Edition, SAGE Publications, 2000. 3. Roberts, Carol M., <i>The Dissertation Journey: A Practical and Comprehensive Guide to Planning, Writing, and Defending Your Dissertation</i>, 3rd Edition, Corwin Press, 2007. 4. Mauch, James E. and Park, Namgi, <i>Guide to the Successful Thesis and Dissertation: A Handbook for Students and Faculty</i>, 5th Edition, Marcel Dekker, 2003. 5. Rudestam, Kjell Erik and Newton, Rae R., <i>Surviving Your Dissertation: A Comprehensive Guide to Content and Process</i>, 2nd Edition, Sage Publications, 2001. 6. Garson, G. David, <i>Guide to Writing Empirical Papers, Theses and Dissertations</i>, Marcel Dekker, 2002. 7. Reinhart, Susan M., <i>Giving Academic Presentations</i>, 2nd Edition, University of Michigan Press, 2013. 8. Oshima, Alice and Hogue, Ann, <i>Writing Academic English</i>, 4th Edition, Pearson Longman, 2006. 9. American Psychological Association. <i>Publication Manual of the American Psychological Association</i>, 6th Edition, American Psychological Association, 2010. 10. Szuchman, Lenore T., <i>Writing with Style: APA Style Made Easy</i>, 5th Edition, Wadsworth/Cengage Learning, 2011. 11. Statistics, simulation, programming, and relevant books. 12. ACM and IEEE magazines, Transactions and Journals. 13. Other International Journals. 	

- | | |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <ol style="list-style-type: none"><li data-bbox="373 127 1490 203">14. Relevant conference proceedings and magazines (including ACM and IEEE conferences).<li data-bbox="373 232 1490 280">15. Technical reports from universities and major companies. |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|