

## Subject Description Form

<b>Subject Code</b>	COMP 4913
<b>Subject Title</b>	Capstone Project
<b>Credit Value</b>	6
<b>Pre-requisite/ Co-requisite/ Exclusion</b>	Exclusion: Any other equivalent capstone project
<b>Objectives</b>	<p>The objectives of this subject are to:</p> <ol style="list-style-type: none"> <li>1. provide a student the opportunities to apply and integrate his/her knowledge acquired throughout the undergraduate study.</li> <li>2. develop the capabilities of a student in analyzing and solving complex and possibly real-life problems.</li> <li>3. train students with skills on systematic development and documentation of a significant piece of work.</li> </ol>
<b>Intended Learning Outcomes</b>	<p>Upon completion of the subject, students will be able to:</p> <p><u>Professional/academic knowledge and skills</u></p> <ol style="list-style-type: none"> <li>(a) conduct literature survey to locate for materials and sources relevant to the selected problem area;</li> <li>(b) understand the materials obtained and connect the materials with the problem to be solved;</li> <li>(c) define and specify the problem precisely;</li> <li>(d) assimilate and apply the knowledge learnt in generating good solutions to the problem;</li> <li>(e) think critically the formulation of alternative models and solutions to the problem, in the analysis of approaches to the solution and their implementation;</li> <li>(f) evaluate the final outcome in an objective manner;</li> </ol> <p><u>Attributes for all-roundedness</u></p> <ol style="list-style-type: none"> <li>(g) improve presentation and communicate skills via oral presentation;</li> <li>(h) enhance technical report writing skills with proper organization of materials;</li> <li>(i) develop the ability to learn independently and to find/integrate information from different sources required in solving real-life problems;</li> <li>(j) manage the project efficiently and effectively through the supervision of supervisor(s);</li> <li>(k) work collaboratively with related parties (e.g. vendors, sponsor company, technical support staff, team-partners, research students, etc.)</li> </ol>

<b>Contribution of the Subject to the Attainment of the Programme Outcomes</b>	This subject contributes to the category A's Programme Outcomes 1-5 and the category B's Programme Outcomes 6-10, through various project development and management activities.																																																
<b>Subject Synopsis/ Indicative Syllabus</b>	<ol style="list-style-type: none"> <li>1. In-depth study of a topic typically proposed by the supervisor</li> <li>2. Project meeting and planning</li> <li>3. Proposal writing</li> <li>4. Regular progress checking and reporting</li> <li>5. Project documentation</li> <li>6. Presentation and demonstration</li> </ol> <p>Capstone Projects are normally proposed by academic staff of the department or in conjunction with external organizations 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>																																																
<b>Teaching/Learning Methodology</b>	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.																																																
<b>Assessment Methods in Alignment with Intended Learning Outcomes</b>	<table border="1" data-bbox="534 1234 1353 1442"> <thead> <tr> <th rowspan="2">Specific Assessment Methods/Tasks</th> <th rowspan="2">% weighting</th> <th colspan="11">Intended subject learning outcomes to be assessed</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th>f</th> <th>g</th> <th>h</th> <th>i</th> <th>j</th> <th>k</th> </tr> </thead> <tbody> <tr> <td>Continuous Assessment</td> <td>100</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> </tbody> </table> <p><u>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</u> The capstone project will be accessed 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>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</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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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Continuous Assessment	100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																																					

	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 project. A mid-term presentation and demonstration may also be required for proper continuous assessment.	
<b>Student study effort expected</b>	Class Contact:	
	Lecture	0 hours
	Other student study effort:	
	Searching and reading materials, meeting with supervisor / others, design and system development, testing, documentation, presentation, etc.	210 hours
	Total student study effort	210 hours
<b>Reading list and references</b>	<p>Reference Books:</p> <ol style="list-style-type: none"> <li>1. Kumar, R. Research Methodology: A Step-by-step Guide for Beginners, Third Edition, SAGE Publications, 2011.</li> <li>2. Burns, R.B. Introduction to Research Methods, Fourth Edition, SAGE Publications, 2000.</li> <li>3. Roberts, C.M. The Dissertation Journey: A Practical and Comprehensive Guide to Planning, Writing, and Defending Your Dissertation, Third Edition, Corwin Press, 2007.</li> <li>4. Mauch, J.E., Park, N. Guide to the Successful Thesis and Dissertation: A Handbook for Students and Faculty, Fifth Edition, Marcel Dekker, 2003.</li> <li>5. Rudestam, K.E., Newton, R.R. Surviving Your Dissertation: A Comprehensive Guide to Content and Process, Second Edition, Sage Publications, 2001.</li> <li>6. Garson, G.D. Guide to Writing Empirical Papers, Theses and Dissertations, Marcel Dekker, 2002.</li> <li>7. Oshima, A. Writing Academic English, Fourth Edition, Pearson Longman, 2006.</li> <li>8. APA. Publication Manual of The American Psychological Association, Sixth Edition, American Psychological Association, 2010.</li> <li>9. Szuchman, L.T. Writing with Style: APA Style Made Easy, Fifth Edition, Wadsworth/Cengage Learning, 2011.</li> <li>10. Statistics, simulation, programming, and relevant books.</li> <li>11. ACM and IEEE magazines, Transactions and Journals.</li> <li>12. Other International Journals.</li> <li>13. Relevant conference proceedings and magazines (including ACM and IEEE conferences).</li> <li>14. Technical reports from universities and major companies.</li> </ol>	