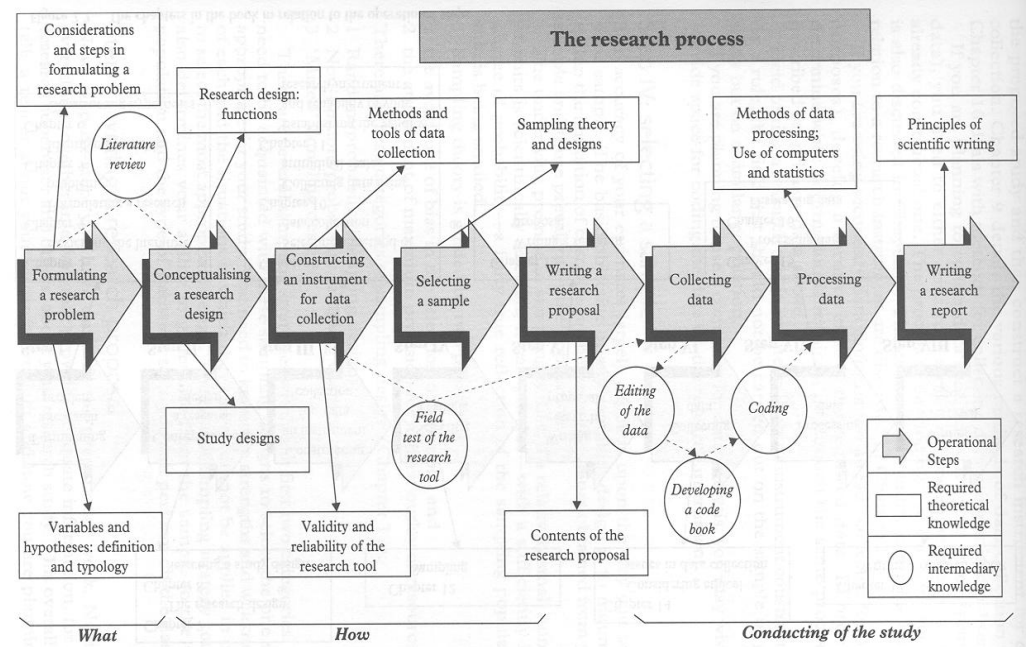


## Subject Description Form

<b>Subject Code</b>	COMP451
<b>Subject Title</b>	Final Year Project
<b>Credit Value</b>	9
<b>Level</b>	4
<b>Pre-requisite / Co-requisite/ Exclusion</b>	Pre-requisite/Co-requisite: Nil Exclusion: COMP401
<b>Objectives</b>	The final year project represents the most important ingredient in the undergraduate study, to provide a student the opportunities to apply knowledge acquired in the undergraduate study. It aims at developing and measuring the capabilities of a student in analyzing and solving complex and possibly real-case problems.
<b>Intended Learning Outcomes</b>	<p>Upon completion of the subject, students will be able to:</p> <p><i>Professional/academic knowledge and skills</i></p> <p>(a) conduct literature survey to locate for materials and sources relevant to the selected problem area;</p> <p>(b) understand the materials obtained and connect the materials with the problem to be solved;</p> <p>(c) define and specify the problem precisely;</p> <p>(d) assimilate and apply the knowledge learnt in generating good solutions to the problem;</p> <p>(e) think critically the formulation of alternative models and solutions to the problem, in the analysis of approaches to the solution and their implementation;</p> <p>(f) evaluate the final outcome in an objective manner;</p> <p><i>Attributes for all-roundedness</i></p> <p>(g) develop critical thinking in general problem solving;</p> <p>(h) improve presentation and communicate skills via oral presentation;</p> <p>(i) enhance technical report writing skills with proper organization of materials;</p> <p>(j) develop the ability to learn independently and to find/integrate information from different sources required in solving real-life problems;</p> <p>(k) manage the project efficiently and effectively through the assistance and supervision of the supervisor.</p>

	<p><b>Alignment of Programme Outcomes:</b></p> <p>Programme Outcome 1: This subject contributes to having students practice their writing skills with project document and report writing, as well as presentation skills with project presentation and demonstration.</p> <p>Programme Outcome 4: This subject contributes to developing student critical thinking ability through the need to understand critically research or practical problems and derive the proper solution systematically. Students also need to evaluate the solution critically.</p> <p>Programme Outcome 5: This subject contributes to developing student problem solving skills through the design and implementation of a system to solve research or practical problems.</p> <p>Programme Outcome 8: This subject requests the student to apply and integrate all relevant knowledge they had learnt throughout the programme into the project and demonstrate that they are able to achieve the programme specific outcome, according to the nature of the project.</p> <p>The other four programme outcomes may be aligned depending on the nature of the project. Some projects require good teamwork, while some others could be related to professionalism and ethics issues.</p>
<p><b>Subject Synopsis/ Indicative Syllabus</b></p>	<ol style="list-style-type: none"> <li>1. In-depth study of a topic proposed by the supervisor</li> <li>2. Proposal writing</li> <li>3. Regular progress checking and reporting</li> <li>4. Project documentation</li> <li>5. Presentation and demonstration</li> </ol>
<p><b>Teaching/Learning Methodology</b></p>	<p><b>Project Management:</b></p> <p>The calendar duration of the project spreads over the final year of the curriculum and extends normally from September to April. The total man-effort required is approximately 40 hours of staff contact and 200 hours of laboratory work and independent study for a normal student, which includes the total time spent on literature search, background reading, fact finding, project development, and report writing. The actual amount of time spent may vary for individuals.</p> <p>Final year projects are normally sponsored by academic staff of the department or in conjunction with external organizations or other departments in the university. However, a student may propose a topic which forms an extension of his/her work during industrial placement, or an area of his/her own research interest contingent upon the condition that he/she could find an interested academic staff to supervise the project. A typical research process to the final year project is as shown:</p>



Projects should be problem-oriented and there is no restriction to the nature of the problem except that it should be relevant to the computing discipline and there must be a computing element in the project. The project could be practical, academic or a hybrid in which the student is encouraged but not constrained to have some original contributions. The student has to submit a *proposal*, a *mid-term checkpoint progress report* and a *final report* throughout the academic year for the final year project. The proposal must be approved by the supervisor before the student can proceed to the final year project. A rejected proposal must be rewritten and resubmitted. An oral presentation and demonstration is essential at the end of the project. If deemed appropriate, mid-term presentation may be held. Proper documentation must be done throughout the project and the techniques from ELC 3507 should be applied to ensure the quality of the necessary documentation.

At or before the beginning of the academic year, each student will be assigned a *supervisor* who is in charge of the entire project. The assignment of supervisor normally follows a set of prescribed procedures, announced a few months before the academic year. The supervisor is responsible for assessing the student based on the set of abilities, as laid down in the “objectives” and “intended learning outcomes” sections above, that the student demonstrated. The deliverables required from a student are: an *Initial Proposal*, a *Mid-term Checkpoint Progress Report*, and a *Final Report*. The deadlines for these are normally week 4, week 14 of semester 1 and week 12 of semester 2 respectively. At the end of the final year, there will be an oral presentation and demonstration which will normally be conducted during week 14 to week 15 of semester 2. There is no limitation as the content of these deliverables except that the initial proposal should include the original problem definition while the final report should include the initial proposal. The check point progress report should be limited to two pages and signed by the supervisor if he/she approves and agrees with the content of the progress report. Late submission of these reports is construed as a lack of self discipline and good project management skill on the part of the student who should be penalized accordingly unless the student could give a reasonable justification such as on the ground of valid medical reasons.

**Assessment Methods in Alignment with Intended Learning Outcomes**

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)										
		a	b	c	d	e	f	g	h	i	j	k
1. Project	100%	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Total	100 %											

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

The learning outcomes are assessed through the completion of a detailed assessment form by the supervisor, co-examiner and second assessor. The major assessment takes the form of a final report and an oral presentation with question and answer session. Through the report and the presentation, the three assessors will evaluate on the contribution of the project and the quality of the work. Question and answer session will allow the assessors to clarify issues and judge on the student's ability to respond. Subject learning outcomes (a) to (i) would be covered by items on the form. Supervisor will also be assessing subject learning outcomes (j) and (k). These relevant attributes are covered in the comprehensive assessment form for supervisor.

The intended learning outcomes are mapped into programme learning outcomes, which are the most important metrics that the programme would need to evaluate. Supervisor also needs to fill in a second part on programme outcome evaluation in the assessment form, besides the project assessment entries, in determining whether the student has achieved the respective programme learning outcomes, namely, outcomes 1, 4, 5, and 8. When deemed appropriate, the supervisor could also evaluate on outcomes 2, 3, 6, and 7.

**Method of Assessment:**

Continuous Assessment	100%
Supervisor	60%
Co-examiner	20%
Second assessor	20%

*There will be an oral presentation of the project. The presentation lasts for 30 minutes, including demonstration and question/answer session. The supervisor, co-examiner and second assessor will score according to the following indicative criteria and weightings. However, the project evaluation will be based on a holistic approach. For instance, an eventually good project with poor self-discipline and lack of consistent progress will not be awarded the grade A.*

	<i>Supervisor</i>	<i>Co-examiner</i>	<i>Second assessor</i>
Problem Identification (literature search)	12%	4%	4%
Problem Solving (critical thinking)	32%	8%	8%
Communication and Presentation (demonstration and reports)	8%	8%	8%
Project Management and Self-Discipline	8%	0%	0%
<b>Total</b>	<b>60%</b>	<b>20%</b>	<b>20%</b>

	<p>The major criteria are standardized for ease of management and fairness to all. However, the supervisor, co-examiner and second assessor could <i>refine a certain criterion</i> in terms of detailed breakdown. Because of the different degrees of involvement, the co-examiner will be responsible for 20% of the marks based on the first three criteria only, and so with the second assessor for 20%, while the supervisor will contribute to 60% of the marks in terms of all four criteria.</p> <p>Supervisor, co-examiner and second assessor have to fill in a detailed assessment form to evaluate on different aspects of the project and the associated subject learning outcomes and the overall grade will be derived. The supervisor also needs to fill in a programme outcome evaluation form. Technically, the supervisor may liaise with the co-examiner and second assessor on the expected results of the project but they should always provide an independent assessment of the project based on the criteria of their concern. In principle, there are major discrepancies arisen, internal moderators will be appointed to moderate the projects. This often takes the form of a judging (and arbitration) panel to consider all projects with high and low grades for fairness and quality assurance for their final grades, and to recommend best FYP award candidates. The panel also helps to resolve any disagreement between supervisor, co-examiner and second assessor. Some other projects may also be moderated so as to even out any undue differences.</p>																	
<b>Student Study Effort Required</b>	<table border="1"> <tr> <td colspan="2" data-bbox="443 1025 1102 1081">Class contact:</td> </tr> <tr> <td data-bbox="443 1081 1102 1149">▪ Staff Contact</td> <td data-bbox="1110 1081 1473 1149">40 Hrs.</td> </tr> <tr> <td data-bbox="443 1149 1102 1216">▪</td> <td data-bbox="1110 1149 1473 1216">Hrs.</td> </tr> <tr> <td colspan="2" data-bbox="443 1216 1102 1283">Other student study effort:</td> </tr> <tr> <td data-bbox="443 1283 1102 1350">▪ Self Work</td> <td data-bbox="1110 1283 1473 1350">200 Hrs.</td> </tr> <tr> <td data-bbox="443 1350 1102 1417">▪</td> <td data-bbox="1110 1350 1473 1417">Hrs.</td> </tr> <tr> <td colspan="2" data-bbox="443 1417 1102 1485">Total student study effort</td> </tr> <tr> <td colspan="2" data-bbox="1110 1417 1473 1485">240 Hrs.</td> </tr> </table>	Class contact:		▪ Staff Contact	40 Hrs.	▪	Hrs.	Other student study effort:		▪ Self Work	200 Hrs.	▪	Hrs.	Total student study effort		240 Hrs.		
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240 Hrs.																		
<b>Reading List and References</b>	<p><b>Reference Books:</b></p> <ol style="list-style-type: none"> <li data-bbox="443 1576 1473 1644">1. Burns, R.B. Introduction to Research Methods, Third Edition, Longman, 1997.</li> <li data-bbox="443 1688 1473 1756">2. Kumar, R. Research Methodology: A Step-by-step Guide for Beginners, Longman, 1996.</li> <li data-bbox="443 1800 1473 1868">3. 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 data-bbox="443 1912 1473 2002">4. Rudestam, K.E., Newton, R.R. Surviving Your Dissertation: A Comprehensive Guide to Content and Process, Second Edition, Sage Publications, 2001.</li> <li data-bbox="443 2047 1473 2074">5. Roberts, C.M. The Dissertation Journey: A Practical and Comprehensive</li> </ol>																	

	<p>Guide to Planning, Writing, and Defending Your Dissertation, Corwin Press, 2004.</p> <ol style="list-style-type: none"><li>6. Garson, G.D. Guide to Writing Empirical Papers, Theses and Dissertations, Marcel Dekker, 2002.</li><li>7. Oshima, A. Writing Academic English, Third Edition, Addison-Wesley Longman, 1999.</li><li>8. APA. Publication Manual of The American Psychological Association, Fifth Edition, American Psychological Association, 2001.</li><li>9. Szuchman, L.T. Writing with Style: APA Style Made Easy, Brooks/Cole, 1999.</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>
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