

## Subject Description Form

<b>Subject Code</b>	COMP5252																																					
<b>Subject Title</b>	Extreme Programming and Agile Software Development																																					
<b>Credit Value</b>	3																																					
<b>Level</b>	5																																					
<b>Pre-requisite/ Exclusion</b>	Nil																																					
<b>Objectives</b>	<p>The objectives of this subject are to:</p> <ol style="list-style-type: none"> <li>1. Study Agile Software Development, Extreme Programming and Software Development Rhythms;</li> <li>2. Describe their unique features relative to traditional software practices;</li> <li>3. Examine their applications in the real world and addresses their impacts on developing software.</li> </ol>																																					
<b>Intended Learning Outcomes</b>	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> <li>a) understand the agile methodologies: extreme programming, scrum, feature driven programming, crystal method;</li> <li>b) apply refactoring techniques;</li> <li>c) understand pair programming and its characteristics;</li> <li>d) apply XP to a small project; and</li> <li>e) relate CMMI and XP.</li> </ol>																																					
<b>Subject Synopsis/ Indicative Syllabus</b>	<ul style="list-style-type: none"> <li>• <b>Overview of Agile Methodologies:</b> Extreme Programming, Scrum, Feature Driven Programming, Crystal Method, Dynamic Systems Development Method.</li> <li>• <b>eXtreme Programming:</b> 12 practices.</li> <li>• <b>Test-Driven Development:</b> xUnit, Different Patterns.</li> <li>• <b>Refactoring:</b> Bad Smells in Code, Building Test, Toward a Catalog of Refactoring, Composing Methods.</li> <li>• <b>Pair Programming:</b> Economics, Productivity and Quality, Pair Learning, Characteristics of different people pair.</li> <li>• <b>CMM and XP:</b> Software Development Rhythms.</li> </ul>																																					
<b>Teaching/Learning Methodology</b>	Class activities including - lecture, tutorial, lab, workshop seminar where applicable																																					
<b>Assessment Methods in Alignment with Intended Learning Outcomes</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Specific Assessment Methods/Tasks</th> <th rowspan="2">% weighting</th> <th colspan="5">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> </tr> </thead> <tbody> <tr> <td>Assignments, Tests &amp; Projects</td> <td style="text-align: center;">55</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>Final Examination</td> <td style="text-align: center;">45</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> </tr> <tr> <td><b>Total</b></td> <td style="text-align: center;"><b>100</b></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Specific Assessment Methods/Tasks	% weighting	Intended subject learning outcomes to be assessed					a	b	c	d	e	Assignments, Tests & Projects	55	✓	✓	✓	✓	✓	Final Examination	45	✓	✓	✓	✓	✓	<b>Total</b>	<b>100</b>					
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<b>Student study effort expected</b>	<b>Class Contact:</b>	
	Class activities (lecture, tutorial, lab)	39 hours
	<b>Other student study effort:</b>	
	Assignments, Quizzes, Projects, Exams	65 hours
	<b>Total student study effort</b>	<b>104 hours</b>
<b>Reading list and references</b>	<p>(1) Rubin, K.S., 2012, Essential Scrum: A Practical Guide to the Most Popular Agile Process, 1<sup>st</sup> Ed, Addison-Wesley Professional.</p> <p>(2) Meyer, B., 2014, Agile!: The Good, the Hype and the Ugly, 1<sup>st</sup> Ed, Springer.</p> <p>(3) Lui, K.M. and Chan, KCC, 2008, Software Development Rhythms, John Wiley.</p>	