

## Subject Description Form

<b>Subject Code</b>	COMP5527																										
<b>Subject Title</b>	Mobile Computing and Data Management																										
<b>Credit Value</b>	3																										
<b>Level</b>	5																										
<b>Pre-requisite/ Exclusion</b>	Nil																										
<b>Objectives</b>	<p>To provide students with knowledge in the area of mobile computing models, architectures, algorithms and techniques and to train them with the ability to</p> <ol style="list-style-type: none"> <li>1. acquire fundamental knowledge in mobile computing and mobile data management;</li> <li>2. learn about mobile computing concepts;</li> <li>3. understand limitations and appreciate innovative solutions;</li> <li>4. apply the knowledge in mobile computing application development and problem solving.</li> </ol>																										
<b>Intended Learning Outcomes</b>	<p>After completing the subject, students should be able to:</p> <ol style="list-style-type: none"> <li>a) better understand mobile computing and mobile data management;</li> <li>b) design and implement innovative mobile network solutions; and</li> <li>c) apply different mobile techniques to pervasive computing systems, context-aware and location-based applications.</li> </ol>																										
<b>Subject Synopsis/ Indicative Syllabus</b>	<ul style="list-style-type: none"> <li>• Introduction to mobile computing</li> <li>• Mobile data management</li> <li>• Disconnected and weakly-connected operations</li> <li>• Location-aware computing</li> <li>• Mobile applications and web services</li> <li>• Selected current topics</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="3">Intended subject learning outcomes to be assessed</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</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> </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> </tr> <tr> <td><b>Total</b></td> <td style="text-align: center;"><b>100</b></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	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) Burkhardt, J., Henn, H., Hepper, S., Raindtorff, K. and Schaeck, T., 2002, Pervasive Computing: Technology and Architecture of Mobile Internet Applications, Addison-Wesley.</p> <p>(2) Tan, K.L. Tan and Ooi, B.C., 2013, Data Dissemination in Wireless Computing Environments, Kluwer Academic Publishers.</p> <p>(3) Milojicic, D.S., Douglis, 1999, F. and Wheeler, R.G., Mobility: Processes, Computers and Agents, Addison-Wesley.</p> <p>(4) Jing, J. and Joshi, A., 1999, Mobile Data Management and Applications, Kluwer Academic Publishers.</p> <p>(5) Pitoura, E. and Samaras, G., 1997, Data Management for Mobile Computing, Kluwer Academic Publishers.</p>	