

Subject Description Form

Subject Code	COMP 5352
Subject Title	Advanced Internet Computing and Technology
Credit Value	3
Level	5
Pre-requisite/ Exclusion	Prerequisite: COMP5321 Enterprise Web and Internet Computing for Managers or COMP5322 Internet Computing and applications
Objectives	<p>The objectives of this subject are:</p> <ol style="list-style-type: none"> 1. to introduce student to the advance concepts of Internet Computing and to equip student with up-to-date knowledge on state-of-the-art technologies; 2. to provide hands-on training to the concepts learned by applying the technologies to developing real world applications; 3. to understanding and appreciate the evolving wave of next generation distributed computing paradigm based on Internet to provide intergalactic client/server framework; 4. to train up student with ability to analyse and give critics to research papers, with the necessary skill and knowledge to consolidate and produce quality technical research report.
Intended Learning Outcomes	<p>After completing this subject, students should be able to:</p> <ol style="list-style-type: none"> a) gain a good overall understanding and appreciation of the advanced technologies encompassing Internet Computing; b) appreciate the significant benefits of service oriented architecture (SOA) in organizing increasing complex information systems; c) critically assess the problems and issues surrounding the challenges presented to them. In the process of formulating a holistic solution to the problems, students are taught the skill sets; and d) understand the core concepts that underpin SOA that will provide them with the necessary skill sets to acquire further knowledge as the technology continues to evolve.
Subject Synopsis/ Indicative Syllabus	<p>Advance XML</p> <ul style="list-style-type: none"> • Revision on fundamentals of XML. • XML Schemas. • Semantic Web • Meta-XML <p>Distributed Computing based on Web Services</p> <ul style="list-style-type: none"> • Architecting Web Services • Compare against CORBA and DCOM • Building blocks of web services: SOAP • Programming Web services using Java

	<ul style="list-style-type: none"> • WSDL, UDDI • NET, SUN ONE, IBM Web Services <p>Advanced HTTP and Content Distribution</p> <ul style="list-style-type: none"> • HTTP Security. Digest authentication, HTTPS, secured tunnelling. • Advanced concepts of load balancing. Session persistence. URL switching • Cooperative web caching • Redirection and Load Balancing 																												
Teaching/Learning Methodology	<p>Class activities including - lecture, tutorial, lab, workshop seminar where applicable.</p> <p>In addition to the regular lectures, students are required to work on lab exercises that are designed to complement the course materials. For advance topics, students are required to survey research papers, discuss, analyse and present the findings in the form of a written reports and classroom presentations. Students are also required to work on a practical project that requires the design and development of an application that leverages on the technologies that are taught in the class. Final assessment is in the form of a written examination.</p>																												
Assessment Methods in Alignment with Intended Learning Outcomes	<table border="1"> <thead> <tr> <th rowspan="2">Specific Assessment Methods/Tasks</th> <th rowspan="2">% weighting</th> <th colspan="4">Intended subject learning outcomes to be assessed</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>Assignments, Tests & Projects</td> <td>55</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Final Examination</td> <td>45</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Total</td> <td>100</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	Assignments, Tests & Projects	55	✓	✓	✓	✓	Final Examination	45	✓	✓	✓	✓	Total	100				
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Student study effort expected	<p>Class Contact:</p> <table border="1"> <tr> <td>Class activities (lecture, tutorial, lab)</td> <td>39 hours</td> </tr> </table> <p>Other student study effort:</p> <table border="1"> <tr> <td>Assignments, Quizzes, Projects, Exams</td> <td>65 hours</td> </tr> <tr> <td>Total student study effort</td> <td>104 hours</td> </tr> </table>	Class activities (lecture, tutorial, lab)	39 hours	Assignments, Quizzes, Projects, Exams	65 hours	Total student study effort	104 hours																						
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Reading list and references	<p>(1) Michael Papazoglou, Web Services: Principles and Technology, Prentice Hall, Sep 2007.</p> <p>(2) Thomas Erl, Service-Oriented Architecture: A Field Guide to Integrating XML and Web Services, Prentice Hall, Apr 2004.</p>																												