

Subject Description Form

Subject Code	COMP418
Subject Title	Electronic Commerce
Credit Value	3
Level	4
Pre-requisite / Co-requisite/ Exclusion	Pre-requisite: COMP311 (not applicable for 61025), COMP320
Objectives	<p>To thoroughly understand the information technology for supporting E-commerce; specifically, the students should:</p> <ul style="list-style-type: none"> • understand applied cryptographic technology and Web security protocols; • understand the necessary infrastructure and functional components to develop E-commerce systems; • understand the design and application of E-commerce systems.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <p><u>Professional/academic knowledge and skills</u></p> <p>(a) acquire a good knowledge of e-commerce, both the technical and business aspects;</p> <p>(b) understand the principles and practices of E-commerce and its related technologies;</p> <p>(c) design and implement a basic E-commerce application;</p> <p><u>Attributes for all-roundedness</u></p> <p>(d) follow trends of E-commerce;</p> <p>(e) build up on team work, presentation and technical writing skills.</p> <p>Alignment of Programme Outcomes:</p> <p>Programme Outcome 1: This subject contributes to having students practice their writing skills with report writing.</p> <p>Programme Outcome 4: This subject contributes to developing student critical thinking through written assignments and a project.</p> <p>Programme Outcome 5: This subject contributes to problem solving with programming skills through lab exercises and a project.</p> <p>Programme Outcome 7: This subject contributes to team work with a project for students to work in a team.</p>

Subject Synopsis/ Indicative Syllabus	Topic																																																										
	1. Introduction to E-commerce E-commerce fundamentals; different types of E-commerce; major components; business models; business issues.																																																										
	2. Web system Internet basics; Web model; Web system; Hypertext Transfer Protocol (HTTP); Web programming.																																																										
	3. Cryptography and Internet security Security requirements; basic cryptography; encryption methods; public key encryption; message digest; message authentication; digital signature; digital certificate; IPSec; firewalls; SSL.																																																										
	4. Internet payment systems Credit card payment (e.g., SET protocol); E-cash; E-check; Internet payment services; smart card.																																																										
	5. E-commerce applications and advanced topics Various E-commerce applications; case studies; auctions; advanced E-commerce systems.																																																										
	Laboratory Experiment: Laboratory exercises on an E-commerce application.																																																										
	Case Study: E-commerce applications.																																																										
Teaching/Learning Methodology	Teaching is mainly conducted through lectures. Learning is supplemented by exercises in labs/tutorials. Students are assessed through assignments, a project, a mid-term test and an examination.																																																										
Assessment Methods in Alignment with Intended Learning Outcomes	<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="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Assignments</td> <td rowspan="3" style="text-align: center;">55%</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td></td> <td style="text-align: center;">✓</td> <td></td> <td></td> </tr> <tr> <td>2. Project</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> <td></td> </tr> <tr> <td>3. Mid-term</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. Examination</td> <td style="text-align: center;">45%</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td></td> <td style="text-align: center;">✓</td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td style="text-align: center;">100 %</td> <td colspan="6"></td> </tr> </tbody> </table> <p>The project is used to assess all learning outcomes.</p> <p>The assignments and mid-term test are used as continuous assessment methods to assess students' knowledge and understanding about the subject.</p> <p>Finally, students are assessed by a formal examination.</p>							Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e		1. Assignments	55%	✓	✓		✓			2. Project	✓	✓	✓	✓	✓		3. Mid-term	✓	✓					4. Examination	45%	✓	✓		✓			Total	100 %						
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Student Study Effort Required	Class contact:	
	▪ Lecture	39 Hrs.
	(Labs will also be arranged.)	
	Other student study effort:	
	▪ Self-study and other related work	65 Hrs.
	Total student study effort	104 Hrs.
Reading List and References	<p>Textbook:</p> <ol style="list-style-type: none"> 1. Chan, H., Lee, R., Dillon, T. and Chang, E., E-Commerce: Fundamentals and Applications, John Wiley & Sons, 2001. <p>Reference Books:</p> <ol style="list-style-type: none"> 1. Turban, E., Lee, J.K., King, D., Liang, T.P. and Turban, D., Electronic Commerce: A Managerial Perspective 2010, Sixth Edition, Prentice Hall, 2009. 2. Laudon, K.C. and Traver, C.G., E-commerce 2014, Tenth Edition, Prentice Hall, 2013. 3. Stallings, W., Cryptography and Network Security: Principles and Practice, Fifth Edition, Prentice Hall, 2010. 4. O'Mahony, D., Peirce, M.A. and Tewari, H., Electronic Payment Systems for E-Commerce, Artech House, Second Edition, 2001. 5. Furche, A. and Wrightson, G., Computer Money: A Systematic Overview of Electronic Payment Systems, Morgan Kaufmann, 1996. 6. Moss, K., Java Servlets, McGraw-Hill, 1999. 7. Ortiz, C.E. and Giguere, E., Mobile Information Device Profile for Java 2 Micro Edition, John Wiley & Sons, 2001. 8. Muchow, J.W., Core J2ME: Technology and MIDP, Prentice Hall, 2002. 9. Lee, R.S.T., Fuzzy-Neuro Approach to Agent Applications (From the AI Perspective to Modern Ontology), Springer-Verlag, Heidelberg, 2006. 	