

Module Code	Pre-requisite Module codes	Co-Requisite Modules code(s)	ISCED Code	Subject Code	ECTS Credits	NFQ Level (CPD)#
CMPU4043					5	8
<b>Module Title</b>	Rich Web Application Development					

### Rich Web Application Development

<b>School Responsible:</b>	School of Computing
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<b>Module Overview:</b>
<p>This module teaches how to develop rich web applications with a particular emphasis on client-side development. The module shows how key design characteristics will affect the decision on selecting specific technologies to develop a web application. Advances in underlying Internet frameworks will also be examined and how these can aid in developing sophisticated applications</p>

<b>Learning Outcomes (LO):</b>	
On Completion of this module, the learner will be able to	
<b>1</b>	Develop a sophisticated web application using predominantly client-side technologies.
<b>2</b>	Make appropriate decisions in selecting suitable technologies to implement a complex web application
<b>3</b>	Distinguish the importance of correct design patterns for web applications that involve different components.
<b>4</b>	Analyse existing web applications and be able to identify areas that may be improved using more suitable mechanisms.

<b>Indicative Syllabus:</b>
<p>The content of the module will include:</p> <ul style="list-style-type: none"> <li>• Ruby – Using Ruby to develop rich web applications</li> <li>• AJAX – Introduction to AJAX, AJAX and JavaScript, developing applications with AJAX, advantages of AJAX against using other client-side technologies.</li> <li>• Python – Introduction to Python, using Python in rich web application development</li> <li>• Adobe Flex – Developing rich and sophisticated interfaces to web applications, comparison to other similar GUI technologies, XML</li> </ul>

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<b>Learning and Teaching Methods:</b>	
<p>This module can be delivered either through standard delivery or blended delivery.</p> <p>In standard delivery this module is delivered through a series of lectures with associated practical assignments.</p> <p>In blended delivery this module is delivered through a series of live and recorded lectures with associated laboratory work and practical assignments.</p> <p>Both blended and standard delivery have the same overall number of teaching and self-directed learning hours.</p>	
<b>Total Teaching Contact Hours</b>	39
<b>Total Self-Directed Learning Hours</b>	61

<b>Module Delivery Duration:</b>
This module is delivered over one semester

<b>Assessment</b>		
<b>Assessment Type</b>	<b>Weighting (%)</b>	<b>LO Assessment (No.)</b>
Final Exam	50%	1-4
In Class Assessment	4=50%	1-4
<b>Module Specific Assessment Arrangements (if applicable)</b>		
(a) Derogations from General Assessment Regulations		
(b) Module Assessment Thresholds		
(c) Special Repeat Assessment Arrangements		

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**Essential Reading:** (author, date, title, publisher)

Dave Thomas, Chad Fowler, Andy Hunt, 2004, Programming Ruby, 2nd Edition, O'Reilly

Paul Barry, 2010, Head First Python, 1st Edition, O'Reilly

Anthony T. Holdener, 2008, AJAX: The Definitive Guide, 1st Edition, O'Reilly

Yakov Fain, Victor Rasputnis, Anatole Tartakovsky, 2010, Enterprise Development with Flex, 1st Edition, O'Reilly

**Supplemental Reading:** (author, date, title, publisher)

Ian F. Darwin, Jason Brittain, 2003, Tomcat: The Definitive Guide, 1st Edition, O'Reilly and Associates

Alaric Cole, Elijah Robison, 2010, Learning Flex 4, 1st Edition, O'Reilly

Simson Garfinkel & Gene Spafford, 2001, Web Security, Privacy & Commerce, 2nd Edition, O'Reilly and Associates

<b>Version No:</b>		<b>Amended By</b>	
<b>Commencement Date</b>		<b>Associated Programme Codes</b>	

# Modules that are to be offered as Stand-Alone CPD Programmes must have an NFQ level assigned

\*Details of the assessment schedule should be contained in the student handbook for the programme stage.

Date of Academic Council approval.....

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