



<b>Title:</b>	Client-side Web Development <b>APPROVED</b>
<b>Long Title:</b>	Client-side Web Development
<b>Module Code:</b>	SOFT7031
<b>Duration:</b>	1 Semester
<b>Credits:</b>	5
<b>NFQ Level:</b>	Intermediate
<b>Field of Study:</b>	Computer Software
<b>Valid From:</b>	Semester 1 - 2017/18 ( September 2017 )
<b>Module Delivered in</b>	<a href="#">3 programme(s)</a>
<b>Module Coordinator:</b>	Sean McSweeney
<b>Module Author:</b>	GARY COUSE
<b>Module Description:</b>	This module builds on the student's fundamental web development skills allowing them to use more sophisticated techniques for creating the layout and functionality of their web pages. They will be able to identify elements, as individuals or in groupings, on a page with precision, master the CSS box model in order to give them more control over their layouts, and explore the properties that will allow them to apply advanced CSS features such as animations and responsive layouts. They will also investigate JavaScript in more detail, allowing them to add interactivity to their web pages, and to augment their existing HTML and CSS, while gaining a greater understanding of the underlying technologies and concepts.
<b>Learning Outcomes</b>	
<i>On successful completion of this module the learner will be able to:</i>	
LO1	Use web standards techniques to identify, position, style and animate elements on a web page.
LO2	Combine the CSS styles applied to web pages in order to create modern layouts that can adapt to the environment they are deployed in.
LO3	Identify and manipulate scriptable components in their web pages with JavaScript.
LO4	Create interactive layouts for web pages by combining JavaScript with other web standards.
<b>Pre-requisite learning</b>	
<b>Incompatible Modules</b>	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module. You may not earn additional credit for the same learning and therefore you may not enrol in this module if you have successfully completed any modules in the incompatible list.</i>	
No incompatible modules listed	
<b>Co-requisite Modules</b>	
No Co-requisite modules listed	
<b>Requirements</b>	
<i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed. You may not enrol on this module if you have not acquired the learning specified in this section.</i>	
No requirements listed	
<b>Co-requisites</b>	
No Co Requisites listed	

**Module Content & Assessment**

**Indicative Content**

**Identifying Elements in CSS**

Document structure. Semantic elements. Advanced CSS Selectors, pseudo classes, pseudo selectors. Web standards. Separating Style & Content

**Styling Elements**

Selecting rendering types for display boxes, replaced versus non-replaced elements, position types (absolute, float, fixed, relative), measurements (absolute, relative). Typography (web-fonts, hosting services, font formats). Animating elements (keyframes, transitions), advanced layouts (grids, flexbox).

**Combining CSS Styles**

The cascade. Importing styles. Style sources. Specificity. Inheritance. Weighting. Origin. Order. Alternate style sheets. Responsive Web Design. Adaptive Web Design. Viewports, breakpoints, media queries, proportional lengths, proportional font-sizes. Responsive images/media. Fluid images.

**JavaScript for Client-side Development**

JavaScript native language features. Embedding JavaScript. External Files. JavaScript Event Handlers. Event Listeners. Event objects. JavaScript objects. Object references, methods, properties. Predefined objects. Window object. Client-side JavaScript Objects. Document Object Model, Traversing the DOM. Elements/Node Objects. Manipulating objects.

**Assessment Breakdown**

	%
Course Work	100.00%

**Course Work**

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Short Answer Questions	This SAQ will assess the students on the theoretical content of the module.	1,2,3,4	20.0	Week 5
Project	An example project would be to create a specified advanced web page layout using HTML and CSS.	1,2	30.0	Week 7
Project	An example project would be to create a web page with an interactive layout as specified in class with JavaScript, CSS and HTML.	1,2,3,4	50.0	Week 13

No End of Module Formal Examination

**Reassessment Requirement**

**Coursework Only**

*This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination.*

**The institute reserves the right to alter the nature and timings of assessment**

**Module Workload**

<b>Workload: Full Time</b>				
<i>Workload Type</i>	<i>Workload Description</i>	<i>Hours</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	Lecture underpinning learning outcomes.	2.0	Every Week	2.00
Lecture	Lab supporting content delivered in class.	2.0	Every Week	2.00
Independent & Directed Learning (Non-contact)	Independent study.	3.0	Every Week	3.00
Total Hours				7.00
Total Weekly Learner Workload				7.00
Total Weekly Contact Hours				4.00

<b>Workload: Part Time</b>				
<i>Workload Type</i>	<i>Workload Description</i>	<i>Hours</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	Lecture underpinning learning outcomes.	2.0	Every Week	2.00
Lab	Lab supporting content delivered in class.	2.0	Every Week	2.00
Independent Learning	Independent study.	3.0	Every Week	3.00
Total Hours				7.00
Total Weekly Learner Workload				7.00
Total Weekly Contact Hours				4.00

## Module Resources

### Recommended Book Resources

- Jon Duckett 2014, *JavaScript & jQuery: Interactive Front-End Web Development*, John Wiley & Sons [ISBN: 9781118531648]
- Jon Duckett 2011, *HTML & CSS: Design and Build Web Sites*, John Wiley & Sons [ISBN: 9781118008188]

### Supplementary Book Resources

- Lea Verou, *CSS Secrets: Better Solutions to Everyday Web Design Problems*, O'Reilly [ISBN: 9781449372637]

*This module does not have any article/paper resources*

### Other Resources

- Website: *CSS Tricks*  
<http://css-tricks.com>
- Website: Pete LePage 2016, *Responsive Web Design Basics*, Google  
<https://developers.google.com/web/fundamentals/design-and-ui/responsive/>
- Website: Mozilla Mozilla Developer Network: *JavaScript*, Mozilla  
<https://developer.mozilla.org/en-US/docs/Web/JavaScript>
- Website: Mozilla Mozilla Developer Network: *CSS*  
<https://developer.mozilla.org/en-US/docs/Web/CSS>

**Module Delivered in**

<b>Programme Code</b>	<b>Programme</b>	<b>Semester</b>	<b>Delivery</b>
CR_KITMN_8	<a href="#"><u>Bachelor of Science (Honours) in IT Management</u></a>	3	Elective
CR_KITSP_7	<a href="#"><u>Bachelor of Science in Information Technology</u></a>	3	Elective
CR_KCOMP_7	<a href="#"><u>Bachelor of Science in Software Development</u></a>	5	Mandatory