

UNIT SPECIFICATION				
<b>Unit title</b> User Centred Web Development				
<b>Level</b>	Level 5	<b>Credit value</b>	20 (10 ECTS)	
<b>Is this a common unit?</b>		Yes	<b>Expected contact hours for unit</b>	36
<b>Pre and co-requisites</b> None				
<b>Aims</b> To explore the practices and methodologies of Web application development following a user centred design approach. To gain hands-on experience in Web application design and development using available tools and methods as well as ready-made Web applications. To develop an understanding of sustainable Web design and development.				
<b>Intended learning outcomes (ILOs)</b>  Having completed this unit the student is expected to: <ul style="list-style-type: none"><li>1. Demonstrate understanding of user centred design approaches in the context of Web development;</li><li>2. Design Web user interfaces (WUI) for a variety of contexts using appropriate tools and methods;</li><li>3. Build Web user interface (WUI) prototypes in a user-centred design process using appropriate web technologies;</li><li>4. Evaluate designs with appropriate usability evaluation methods and analyse evaluation results using proper analytical methods</li><li>5. Implement design solutions through customising read-made web content management systems (WCMS).</li><li>6. Understand related legal, ethical and social issues deriving from such web applications so as to maintain their health and sustainability.</li></ul>				
<b>Learning and teaching methods</b> The unit is taught using a combination of various teaching methods including lectures, seminars, labs and student centred learning (e.g., lab exercises). Practical work is mainly in the lab and through the development of an E-business site. Concepts and techniques as well as important issues will be introduced and highlighted in lectures. Students will be directed and stimulated to conduct related research and discussions in seminars. and they will be asked to do practical work Practical work will help students consolidate their understanding of technical issues. Students are expected to appreciate current industrial trends of Web development during directed and independent learning practices.				
<b>Assessment</b>				
<b>Formative assessment/feedback</b>  Students will be given tasks in the lab and seminars to complete and the feedback to their work will be provided.				
<b>Summative assessment</b> Both theoretical and practical elements of ILOs 1 – 6 will be assessed by coursework (100%).			<b>Indicative assessment</b> The coursework might comprise of a fully developed web app, an interactive prototype and a design document.	
<b>Indicative unit content</b> <ul style="list-style-type: none"><li>• <b>User centred design (UCD):</b> Concepts and processes (e.g., ISO9241-210:2010), methods and tools</li></ul>				

(e.g., user analysis, task analysis, personas, card sorting).

- **User interface (UI) design:** Standards and principles, interaction design, Web user interfaces (WUI), prototyping, wireframes and mockups.
- **Web development:** Front-end frameworks (e.g., Bootstrap), JavaScript libraries/frameworks (e.g., JQuery), user interface patterns, backend development languages (e.g., PHP), Web content management systems (e.g., Joomla, WordPress).
- **Usability evaluation:** Usability inquiry methods, usability inspection methods and usability testing methods.
- **Netmarketing and sustainability:** Search engine optimisation (SEO), web analytics concepts and tools (e.g., Google), legal and ethical issues, localisation and other technique aspects etc.

#### Indicative learning resources

##### Books:

- Cooper, A., Reimann, R., Cronin, D. and Noessel, C., 2014. *About face: the essentials of interaction design*. John Wiley & Sons.
- Krug, S., 2013. *Don't make me think: A common sense approach to Web usability (Voices that matter)*. New Riders.
- Nielsen, J., 1994. *Usability engineering*. Elsevier.
- Norman, D.A., 2013. *The design of everyday things: Revised and expanded edition*. Basic books.
- Sharp, H., Rogers, Y. and Preece, J., 2007. *Interaction design: beyond human-computer interaction*.
- Shneiderman, B., 2010. *Designing the user interface: strategies for effective human-computer interaction*. Pearson Education India.

##### Web resources:

- <https://www.interaction-design.org/>
- <https://developers.google.com/web/>
- <http://ui-patterns.com/patterns>
- <https://developer.yahoo.com/ypatterns/>
- <https://www.gov.uk/service-manual/design>
- <https://jquery.com/>
- <http://getbootstrap.com/>
- <https://getmdl.io/>
- <http://php.net/>
- <https://wordpress.org/>
- <https://www.joomla.org/>
- <https://www.drupal.org/>

Unit number	CSE1143C	Version number	4.0
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