2024 / 25

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Ollscoil Teicneolaíochta an Oirdheiscirt

South East Technological University

Module Descriptor

Web Development 1 (Computing and Mathematics)

Web Development 1 (A10923)

Short Title: Web Development 1
Department: Computing and Mathematics
Credits: 5 **Level:** Introductory

Description of Module / Aims

Introduces the student to the fundamental building blocks of the visual aspect of the Web, with an emphasis on the basics of HTML, CSS and Java Script. These topics will be explored collectively to give the student the ability to design dynamic and responsive web micro-sites. Leverage this knowledge and apply it to Contact Management Systems (e.g. WordPress, Django) "mash-up" toolkits (e.g. Yahoo pipes, Zembly), to enable the construction of simple web applications and widgets (Facebook)

Programmes

		stage/semester/status
	BSc (Hons) in Applied Computing (WD_KCOMP_B)	1 / 1 /
	BSc (Hons) in Computer Forensics and Security (WD_KCOFO_B)	1 / 1 /
	BSc in Software Systems Development (WD_KCOMC_D)	1 / 1 /
COMP-0517	HDip in Science in Computer Science (WD_KCOSC_G)	1 / 1 / M

Indicative Content

- Basic Document Constructions: Paragraphs; Line breaks; Headings; Images; Hyperlinks; Lists; Tables; Forms; Frames.
- Cascading Style Sheets: Syntax and Rules.
- Basic Scripting: Simple JavaScript; Variables; Functions; Conditions; Loops and Repetition; Arrays
- The Document Object Model: Nodes, Manipulation
- The role and purpose of Content Management Systems.
- Widget/Mash-up development. The use of Web2.0 style toolkits and integration frameworks.

Learning Outcomes

On successful completion of this module, a student will be able to:

1. Describe the fundamentals of the HTML markup language.
2. Describe the role of Human Computer Interaction and manipulate CSS to present HTML content.
3. Read and adjust simple java script fragments and describe their impact on presentation.
4. Integrate HTML, CSS and Java script to structure simple micro sites and widgets.
5. Describe the role of a Content Management System and be able to integrate and manage simple CMS extensions.
6. Construct simple toolkit based web widgets/applications.

Learning and Teaching Methods

- This course will be delivered via a combination of lecture and studio style practicals.
- The lectures will be ensuring the student has an appreciation of the essential formalisms: mark-up languages and simple scripting.
- Photoshop or equivalent tools will be the focus of the initial programme. However, simple experiments in mash-up and widget development will involve exploration of representative environments and web based tools.
- Practicals will centre on putting these formalisms to work in the creation of micro sites.
- Attention will be paid to the effective use of appropriate tools.

Learning Modes

Learning Type	F/T Hours	P/T Hours
Lecture	24	
Practical	24	
Independent Learning	87	

Assessment Methods

	Weighting	Outcomes Assessed
Continuous Assessment	100%	
Assignment	50%	1,2,4
Assignment	50%	3,4,5,6

Assessment Criteria

<40%: Attention will be paid to the effective use of appropriate tools.

40%–49%: Able to combine HTLM, CSS and simple Java script fragments in a simple micro-site.

50%–59%: All of the above and in addition be able to implement a more sophisticated scripting capability.

60%–69%: Demonstrate an understanding of an encompassing platform, based around a simple CMS. Be able to introduce some simple new features into such a platform using the knowledge gained in the course. Attempt some simple mash-ups.

70%–100%: Be able to construct more ambitious mash-ups/widgets - incorporating HTML, CSS and JavaScript - with some aspect of server side processing.

Essential Material(s)

- Anderson & Anderson, A. *Assemble the Social Web with Zembly.* NY: Prentice-Hall, 2008.
- Crockford, M. *The Good Parts.* NY: Javascript, 2009.
- Robson & Freeman, M. *Head First HTML with CSS & XHTML.* NY: O'Reilly, 2005.

Requested Resources

- Room Type: Computer Lab