

Module Title:	Web II: server-side programming
Module Code:	07C
Level:	4
Credits:	15
Pre-Requisites:	None

Module Description:

In this module, students learn and practise a range of scripting skills that enable them to build interactive, dynamic websites. They gain an appreciation of the differences between server and client scripting environments and learn how to choose which is more appropriate for a given task.

An awareness of the risks of malicious use is essential when creating dynamic websites; students develop a sound appreciation of these dangers, and learn practical strategies for protecting against them.

Indicative Content:

- Client scripting language and browser-based debugging tools
 - Server scripting language and server-based debugging tools
 - Generation of client script by server script
 - Use of client scripting to interact with the DOM
 - Third party client scripting libraries
 - Cross-site scripting, how to protect against it
 - Importance of validation in ensuring correct functionality on client
 - Cookies and sessions
 - Forms
 - Interaction with database server, protection against SQL injection
 - Install web server and perform simple administration tasks
 - Familiarity with key industry administration panel tools
 - Install own scripts
-

Learning and Teaching Methods:

The module will be delivered through a combination of lectures and workshops (3 hours per week).

Module Specifications: Schools of Business & Management & Information Technology

Specific Learning Resources:

Web server accessible in programming lab.

Integrated Development Environment supporting client- and server-side scripting languages.

Text editor.

Bibliography

Highly Recommended

Freeman, E. (2014) Head First JavaScript Programming. Sebastopol, CA, USA: O'Reilly Media.

McLaughlin, B. (2012) PHP and MySQL: The Missing Manual. (2nd edition). Farnham, UK: Pogue Press.

w3cschools (2014) w3schools.com. [Online] Available at: <http://www.w3schools.com/>

PHP.net (2014) php.net. [Online] Available at: <http://www.php.net/manual/en/langref.php>

Recommended

Crowther R.,(2014) HTML5 In Action. Shelter Island, NY, USA: Manning Publications Co.

Duckett, J. (2011) HTML & CSS: Design and Build Web Sites. Indianapolis, USA: John Wiley and Sons, Inc.

McManus, S. (2012) Web Design in Easy Steps. (5th edition). Leamington Spa, UK: Easy Steps Limited.

Codecademy (2014) Codecademy. [Online] Available at: <http://www.codecademy.com/>

Background Reading

Gasston, P. (2013). The Modern Web: Multi-Device Web Development. San Francisco, USA: No Starch Press Inc.

Module Learning Outcomes

Subject Specific Learning Outcomes

On successful completion of this module you will be able to:

LO	Explain the web client-server architecture and the role of scripting within this
----	--

LO	Write, debug and integrate client- and server-side scripts to solve a given problem
----	---

LO	Explain the dangers of cross-site scripting and implement secure scripts that cannot be exploited in this way
----	---

LO	Design and implement a rigorous functional testing strategy to ensure correct
----	---

Module Specifications: *Schools of Business & Management & Information Technology*

operation of the website

Assessment Title or element	Weighting (%)
Assignment 1: basic client and server scripts; code listings and testing documented, with reflection (300 words) [mid semester]	25%
Assignment 2: one application, consisting of multiple client and server scripts; design diagrams, code listings and testing documented, with reflection (600 words) [end semester]	75%