Macao Polytechnic University

Faculty of Applied Sciences

Bachelor of Science in Computing

Module Outline

Academic Year 2022/2023 Semester 1

Learning Module	Web Technologies		**Class Code**	COMP113	
Pre-requisite(s)	Nil				
Medium of Instruction	English			**Credit**	3
Lecture Hours	30 hrs	**Lab/Practice Hours**	15 hrs	**Total Hours**	45 hrs
Instructor	Wilson Ho		**E-mail**	kcho@mpu.edu.mo	
Office	A216, Chi-Un building		**Telephone**	8599-6586	

Description

This module provides a foundation for Web application development and focuses on authoring well-structured web pages. It covers current versions of the Web languages HTML and CSS. Students will have hands-on experience in web page authoring and layout in laboratories.

Learning Outcomes

After completing the learning module, students will be able to:

1. Identify the data structures a web browser builds to render web pages; (SM1p, SM2p)
2. Organize content in a web page using suitable HTML structure; (SM1p, EA1p)
3. Breakdown a web page layout into components and construct a cross-browser compatible implementation; (EA1p, EA4p)
4. Compose web pages using standard-compliant markup and style rules. (EP2p, EP6p)

Content

1. Basic text markup and style (7.5 hours)
    - 1.1 Basic markup: inline, block and list elements
    - 1.2 Text style: properties and inheritance
    - 1.3 The CSS Box Model
    - 1.4 Basic CSS selectors. Specificity
2. Links and web resources (7.5 hours)
    - 2.1 Components of web page and Web architecture
    - 2.2 Links and images
    - 2.3 External style sheet
3. Web document structure (6 hours)
    - 3.1 Syntax and grammar of HTML5
    - 3.2 Adding structure with and
    - 3.3 Sectioning elements in HTML5
4. Web page layout (9 hours)
    - 4.1 Normal flow and Floating
    - 4.2 Column and grid layout. CSS frameworks
    - 4.3 CSS3 flexible box layout
5. Tables and Web forms (9 hours)
    - 5.1 Advanced CSS selectors. Specificity
    - 5.2 Tables: markup and style
    - 5.3 Web forms: markup and layout
6. Advanced topics (6 hours)
    - 6.1 Embedded content
    - 6.2 Absolute positioning
    - 6.3 Dynamic effects using CSS pseudo-classes
    - 6.4 (Optional) CSS cascade

Teaching Method

Lectures and lab practice

Attendance

Attendance requirements are governed by the "Academic Regulations Governing Bachelor's Degree Programmes" of Macao Polytechnic University. Students who do not meet the attendance requirements for the course will not be permitted to sit the final or re-sit examination and shall be awarded an 'F' grade.

Assessment

This learning module is graded on a 100 point scale, with 100 being the highest possible score and 50 being the passing score.

	Item	Description	AHEP3 LO	Percentage
1.	Assignment(s)	Home-based programming exercises	EP2p,EP6p	20%
2.	Test(s)	Knowledge assessment	SM1p,SM2p, EA4p	40%
3.	Examination	3-hour written examination	SM1p,SM2p, EA1p, EA4p	40%
			Total Percentage:	100%

Students with an overall score of less than 35 in the coursework must take the re-sit examination even if the overall score for the module is 50 or above.

Students with a score of less than 35 in the final examination must take the re-sit examination even if the overall score for the module is 50 or above.

Students with an overall final grade of less than 35 are NOT allowed to take the re-sit examination.

Teaching Material

Textbook(s)

There is no official text for this course. Course notes are distributed in the class.

Reference

Reference book(s)

1. Robbins, J. (2018). *Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics*. O'Reilly Media.
2. Ruvalcaba, Z. & Boehm A. (2010). *Murach's HTML5 and CSS3*. Mike Murach & Associates.

Website(s)

1. HTML5 specification: http://www.w3.org/TR/html5/
2. CSS2.2 specification: http://www.w3.org/TR/CSS22/