City University of Hong Kong
Course Syllabus

offered by Department of Information Systems
with effect from Semester A 2022 / 23

Part I   Course Overview

Course Title:	Internet and World-Wide Web Application Development
Course Code:	IS6322
Course Duration:	One Semester (13 weeks)
Credit Units:	3
Level:	P6
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites: *(Course Code and Title)*	IS5311 Business Software Construction; or equivalent
Precursors: *(Course Code and Title)*	Nil
Equivalent Courses: *(Course Code and Title)*	Nil
Exclusive Courses: *(Course Code and Title)*	Nil

Part II   Course Details

1.   Abstract

Course Aims

The aims of this course are to provide the necessary knowledge for students to:
- Explain the Internet and the WWW foundations, such as Internet features, WWW protocol, domain names, the servers, and the browsers.
- Design home pages using HTML and XML.
- Differentiate between client-side and server-side scripting Web tools.
- Code by using Web-based databases.
- Development of Web-based eBusiness systems.

2.   Course Intended Learning Outcomes (CILOs)
(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	Explain the basic concepts of Web technologies and applications.	45%			
2.	Able to creatively design web pages using a Web development tool.	35%	✓	✓	
3.	Able to innovatively develop simple web-based applications which access databases.	20%			✓
		100%			

A1:   Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.
A2:   Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.
A3:   *Accomplishments*
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Teaching and Learning Activities (TLAs)
(TLAs designed to facilitate students' achievement of the CILOs.)

Lecture   :   13 hours

Workshop   :   26 hours

TLA	Brief Description	CILO No. 1	2	3	Hours/week (if applicable)
TLA1. Lecture	Concepts of Web application development are explained using activities designed to enable students to explore and acquire the concepts and knowledge. Concepts of designing user interface, application construction and user interaction are explained and illustrated using examples to enable students understanding on constructing e-Business system.	✓	✓		
TLA2: Laboratory	During laboratory sessions, the following activities are used to reinforce and practice of various modelling and design techniques learnt in lectures: • <u>Exercises</u>: Hands-on activities using a Web application development environment (e.g., Dreamweaver or netbean) for constructing Web applications. • <u>Discussion</u>: Discussion on implications of various concepts learnt in lectures, and how they can be applied to a typical Web application. • <u>Presentations</u>: Members of project team will make presentation of their project work and other teams and the instructor will comment, question and offer suggestions for improvements.	✓	✓		
TLA3. Group Project	Students would have to complete a group project to investigate a real business case, including the choice of business question, data collection, achievement and evaluation of intelligent models, and analysis of results.	✓	✓	✓	

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.			Weighting	Remarks
	1	2	3		
Continuous Assessment: 50%					
AT1: In-class lab-based performance Students should participate in the class activities, such as, small group discussions and presentations, self-reflection, raise and answer questions, and the like to assess students' understanding of the chosen topics and their abilities to apply their skills.		✓	✓	20%	
AT2: Project work A group project, which includes a project report and presentation, will be assigned for students to apply Web application development concepts and technologies to solve business problems.in-depth and to share their findings with other course participants.	✓	✓	✓	30%	
Examination: 50% (duration: one 2-hour exam)					
AT3: Final examination A written examination is developed to assess students' competence level with respect to the intended learning outcomes.	✓	✓		50%	
				100%	

Note: Students must pass BOTH coursework and examination in order to get an overall pass in this course.

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Applicable to students admitted in Semester A 2022/23 and thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. In-class lab-based performance	Capability to creatively design web pages using a Web development tool.	High	Significant	Moderate	Not even reaching marginal levels
	Capability to innovatively develop simple web-based applications which access databases.	High	Significant	Moderate	Not even reaching marginal levels
2. Project Work	Ability to explain the basic concepts of Web technologies and applications.	High	Significant	Moderate	Not even reaching marginal levels
	Capability to creatively design web pages using a Web development tool.	High	Significant	Moderate	Not even reaching marginal levels
	Capability to innovatively develop simple web-based applications which access databases.	High	Significant	Moderate	Not even reaching marginal levels
3. Final Examination	Ability to explain the basic concepts of Web technologies and applications.	High	Significant	Moderate	Not even reaching marginal levels
	Capability to creatively design web pages using a Web development tool.	High	Significant	Moderate	Not even reaching marginal levels

Applicable to students admitted before Semester A 2022/23

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
AT1. In-class lab-based performance	Capability to creatively design web pages using a Web development tool.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to innovatively develop simple web-based applications which access databases.	High	Significant	Moderate	Basic	Not even reaching marginal levels
AT2. Project Work	Ability to explain the basic concepts of Web technologies and applications.	High	Significant	Moderate	Basic	Not even reaching marginal levels

	Capability to creatively design web pages using a Web development tool.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to innovatively develop simple web-based applications which access databases.	High	Significant	Moderate	Basic	Not even reaching marginal levels
AT3: Final Examination	Ability to explain the basic concepts of Web technologies and applications.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to creatively design web pages using a Web development tool.	High	Significant	Moderate	Basic	Not even reaching marginal levels

Part III   Other Information (more details can be provided separately in the teaching plan)

1.   **Keyword Syllabus**
     (An indication of the key topics of the course.)

Foundations of the Internet and the WWW such as Internet features, WWW protocol, domain names, the servers, and the browsers.
Home page design using HTML and XML.
Client-side and server-side scripting Web tools.
Code by using Web-based databases.
Development of Web-based eBusiness systems using a web development tool.

2.   **Reading List**
2.1   **Compulsory Readings**
      (Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1.	Nil

2.2   **Additional Readings**
      (Additional references for students to learn to expand their knowledge about the subject.)

1.	Rogers Cadenhead, Sams Teach Yourself Java in 21 Days (Covering Java 7 and Android), Sams Publishing, 6 edition (August 27, 2012)
2.	Robert W. Sebesta, Programming the World Wide Web, Pearson, 8 edition (March 22, 2014)