

CS2204: FUNDAMENTALS OF INTERNET APPLICATIONS DEVELOPMENT

Effective Term

Semester A 2024/25

Part I Course Overview

Course Title

Fundamentals of Internet Applications Development

Subject Code

CS - Computer Science

Course Number

2204

Academic Unit

Computer Science (CS)

College/School

College of Computing (CC)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

CS1303 Introduction to Internet and Programming, CS2161 Fundamentals of Web Technologies

Part II Course Details

Abstract

This course aims at providing the fundamental skills in programming Internet applications. Upon completion, students should be able to: a) be familiar with the development of WEB programming b) write web pages with the Extensible HyperText Markup Language (XHTML) and Cascading Style Sheet (CSS) c) write dynamic web pages using scripting d) write a basic client-side web-based application

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if DEC-A1 app.)		DEC-A2	DEC-A3
1	Explain the development of WEB and its current trends.	5	x		
2	Apply internet development tools such as XHTML editor.	5		x	
3	Design and implement static Web pages using WEB standards.	54		x	
4	Create and set up Web sites and write interactive Web pages.	29			
5	Describe, compare and evaluate the design techniques required for Internet applications.	7		x	

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 real-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.

Learning and Teaching Activities (LTAs)

LTAs		Brief Description	CILO No.	Hours/week (if applicable)
1	1	Students will engage with the introduction to the web programming concepts and techniques.	1, 2	Lecture: 3 hours/week
2	2	Students will engage with self-paced exercises focusing on individual topics.	3, 4	Tutorial: at least 8 hours/semester
3	3	Problem Based Learning (XPBL) approach is adopted; students are required to implement a coursework project.	3, 4, 5	

Assessment Tasks / Activities (ATs)

ATs		CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Quiz is used to assess students' understanding of fundamental concepts.	1, 3, 4, 5	15	
2	Coursework is designed to assess students' ability to set up Web pages; it will include components with emphasis on structure, style setting and Javascript programming	3, 4, 5	35	

Continuous Assessment (%)

50

Examination (%)

50

Examination Duration (Hours)

2

Additional Information for ATs

For a student to pass the course, at least 30% of the maximum mark for the examination must be obtained.

Assessment Rubrics (AR)**Assessment Task**

Coursework are designed to assess students' ability to set up Web pages

Criterion

1.1. Ability to use matching structures in Web pages to meet specified requirements

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching margin level

Assessment Task

Coursework are designed to assess students' ability to set up Web pages

Criterion

1.2. Ability to design the layout of Web pages with justification

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching margin level

Assessment Task

Coursework are designed to assess students' ability to set up Web pages

Criterion

1.3. Ability to write Javascript codes with good practice to meet specified requirements

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching margin level

Assessment Task

Quiz

Criterion

2.1. Quantitative mark based

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching margin level

Assessment Task

Examination

Criterion

3.1 Quantitative mark based

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching margin level

Part III Other Information

Keyword Syllabus

Review of Internet organization, Common Internet services and protocols. HyperText Transfer Protocol (HTTP), Client-server model, HyperText Markup Language (HTML), Document Object Model (DOM), Cascading Style Sheet (CSS), Scripting language and Web browser, JavaScript and Client-side programming models.

Syllabus

- Review of Internet and World Wide Web
- HTTP, WEB multimedia, XHTML CSS, and DOM
- Client-side Scripting
- Dynamic HTML and introduction to HTML5 scripting API

Reading List**Compulsory Readings**

Title	
1	Duckett J., (2014). Web Design with HTML, CSS, JavaScript and jQuery Set, Wiley, 1st edition.

Additional Readings

Title	
1	Osborn J., (2011). HTML5 Digital Classroom. Wiley, 1st edition.
2	Duckett J., (2009). Beginning HTML, XHTML, CSS, and JavaScript, Wiley, 1st edition.
3	Various on-line resources on HTML, CSS and Javascript