

# CS2204: FUNDAMENTALS OF INTERNET APPLICATIONS DEVELOPMENT

---

## Effective Term

Semester A 2022/23

## 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 Engineering (EG)

### 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 app.)	DEC-A1	DEC-A2	DEC-A3
1	Explain the development of WEB and its current trends.	5	x		
2	Use of 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	Understand, 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.

### Teaching and Learning Activities (TLAs)

TLAs		Brief Description	CILO No.	Hours/week (if applicable)
1	1	Lecturing, discussions, question and answer based tutorial sessions.	1, 2	Lecture: 3 hours/week
2	2	Instructor led and self-paced exercises focused on individual topics.	3, 4	Tutorial: at least 8 hours/semester
3	3	Problem Based Learning (PBL) approach is adopted; students are required to implement a Web application project.	3, 4, 5	

**Assessment Tasks / Activities (ATs)**

ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)	
1	3 Short Quizzes are used to assess students' understanding of fundamental concepts	1, 3, 4, 5	15	
2	Coursework are 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