

IS6322: INTERNET AND WORLD-WIDE WEB APPLICATION DEVELOPMENT

Effective Term

Semester A 2026/27

Part I Course Overview

Course Title

Internet and World-Wide Web Application Development

Subject Code

IS - Information Systems

Course Number

6322

Academic Unit

Information Systems (IS)

College/School

College of Business (CB)

Course Duration

One Semester

Credit Units

3

Level

P5, P6 - Postgraduate Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

IS5311 JAVA Programming for Business Applications; or equivalent

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

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.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Explain the basic concepts of Web technologies and applications.	45			
2	Design web pages using a Web development tool.	35	x	x	
3	Design simple web-based applications which access databases.	20			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	Lecture	Students will learn the concepts of Web application development through the activities designed to enable students to explore and acquire the concepts and knowledge. Students will learn the concepts of designing user interface, application construction and user interaction through the examples to enable students understanding on constructing e-Business system.	1, 2	Lecture : 13 hours Workshop : 26 hours

2	Laboratory	Students will spend time to reinforce and practice various modelling and design techniques learnt in lectures through the following activities during the laboratory sessions: - Exercises: Hands-on activities using a Web application development environment (e.g., Dreamweaver or netbean) for constructing Web applications. - Discussion: Discussion on implications of various concepts learnt in lectures, and how they can be applied to a typical Web application. - Presentations: 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.	1, 2	
3	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.	1, 2, 3	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks	Allow Use of GenAI?
1	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.	2, 3	20	-	Yes
2	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.	1, 2, 3	30	-	Yes

Continuous Assessment (%)

50

Examination (%)

50

Examination Duration (Hours)

2

Additional Information for ATs

Final examination

A written examination is developed to assess students' competence level with respect to the intended learning outcomes.

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

Assessment Rubrics (AR)**Assessment Task**

AT1. In-class labbased performance (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Capability to creatively design web pages using a Web development tool.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT1. In-class labbased performance (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Capability to innovatively develop simple web-based applications which access databases.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT2. Project Work (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to explain the basic concepts of Web technologies and applications.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT2. Project Work (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Capability to creatively design web pages using a Web development tool.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT2. Project Work (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Capability to innovatively develop simple web-based applications which access databases.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT3. Final Examination (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to explain the basic concepts of Web technologies and applications.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT3. Final Examination (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Capability to creatively design web pages using a Web development tool.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

In-class lab- based performance (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Capability to creatively design web pages using a Web development tool.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

In-class lab- based performance (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Capability to innovatively develop simple web-based applications which access databases.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

Project Work (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to explain the basic concepts of Web technologies and applications.

Excellent

(A+, A, A-) High

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Excellent

(A+, A, A-) High

Good

(B+, B) Significant

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(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

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.

Reading List**Compulsory Readings**

Title	
1	Nil

Additional Readings

Title	
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)