



Aror University of Art, Architecture, Design & Heritage Sukkur.

ARTIFICIAL INTELLIGENCE F-24 SECTION (A,B,C)

Application of Information & Communication Technologies (Lab)

Course Title:	Application of Information & Communication Technologies (Lab)
Course Code:	CSC102
Credit Hours:	(2+1)
Course Instructor:	Ghulam Mustafa
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Aim of the Course

The primary aim of the Application of ICT Lab is to provide students with a foundational understanding and hands-on experience in Information and Communication Technology (ICT) tools and techniques. The course focuses on equipping students with practical skills in web technologies, office applications, programming fundamentals, and database management, empowering them to apply these skills in academic, professional, and creative contexts.

Objectives of the Course

By the end of this course, students will be able to:

- 1. Understand the Basics of ICT Tools and Web Technologies**
 - Gain knowledge of essential web concepts, including browsers, URLs, hyperlinks, and search engines.
 - Familiarize themselves with email platforms and effectively manage email communication.
- 2. Develop Proficiency in Office Applications**
 - Utilize Microsoft Word for document creation, formatting, and management.
 - Apply advanced tools like tables, page layouts, and references to enhance productivity.
- 3. Learn Fundamental Web Development Skills**
 - Understand the structure of HTML and develop web pages using fundamental HTML elements.
 - Work with hyperlinks, images, and forms to create interactive web pages.
 - Use CSS to style web pages and improve user interface design.
- 4. Explore Programming and Scripting Basics**
 - Learn the basics of JavaScript to add interactivity to web pages.
 - Develop simple scripts for dynamic behavior and understand DOM manipulation.
- 5. Build Database and Server-Side Skills**
 - Understand the fundamentals of PHP for server-side scripting.



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- Learn MySQL to manage databases and integrate them with web applications.

6. Implement Responsive and Functional Websites

- Design and develop a responsive website using HTML, CSS, JavaScript, PHP, and MySQL.
- Explore tools like WordPress to create professional, mobile-friendly websites.

7. Apply ICT Knowledge in Real-World Scenarios

- Work on a capstone project to integrate and demonstrate all learned skills.
- Develop problem-solving abilities by applying ICT tools to practical use cases.

Detailed Outline Table

No	Topic	Subtopics	Suggested Reading/ Resources	% Covered
1	Introduction to the Web	1. Understanding web browsers (Chrome, Firefox, Edge) 2. Components of URLs 3. Basics of hyperlinks and navigation	Instructor's notes	31.25%
2	Search Engines	1. Overview of search engines 2. Advanced search techniques on Google (Bing, Yahoo basics) 3. Privacy-focused engines like DuckDuckGo 4. Regional search engines (e.g., Baidu)	Instructor's notes	12.5%
3	Introduction to Emails	1. Steps to create a Gmail account Writing effective emails (compose, subject, and body) 2. Replying/forwarding emails 3. Exploring the navigation bar and toolbar features	Instructor's notes	18.75%
4	MS Word Basics	1. Introduction to the File tab 2. Saving and printing documents 3. Sharing documents securely 4. Closing and reopening documents	Instructor's notes	25%
5	MS Word Intermediate	1. Font formatting (bold, italics, underline, colors) 2. Paragraph alignment and spacing 3. Applying styles for consistency Editing tools (find/replace)	Instructor's notes	31.25%



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6	MS Word Advanced	<ol style="list-style-type: none"> 1. Creating tables and inserting media 2. Using headers and footers 3. Linking documents 4. Adjusting page layout and margins 	Instructor's notes	37.5%
7	Introduction to HTML	<ol style="list-style-type: none"> 1. Basic HTML structure Using headings (h1-h6) for hierarchy 2. Adding paragraphs (p) and lists (ul, ol) 	Instructor's notes	43.75%
8	HTML: Hyperlinks & Images	<ol style="list-style-type: none"> 1. Adding hyperlinks with <a> tags 2. Difference between internal and external links 3. Inserting images using tag 4. Understanding the alt attribute for accessibility 	Instructor's notes	50%
9	HTML Forms	<ol style="list-style-type: none"> 1. Creating text input fields Using checkboxes and radio buttons 2. Dropdown menus for options Adding input validation attributes 	Instructor's notes	56.25%
10	HTML5 Multimedia	<ol style="list-style-type: none"> 1. Embedding audio using <audio> tag 2. Adding videos with <video> tag 3. Embedding content with <iframe> (e.g., Google Maps, YouTube) 	Instructor's notes	62.5%
11	CSS Basics	<ol style="list-style-type: none"> 1. Understanding inline, internal, and external CSS 2. Applying CSS selectors (class, id) 3. Formatting fonts and typography 4. Adding colors and backgrounds 	Instructor's notes	68.75%
12	JavaScript Fundamentals	<ol style="list-style-type: none"> 1. Declaring variables with var, let, and const 2. Introduction to data types (string, number, boolean) 3. Arithmetic, comparison, and logical operators 4. Adding JS scripts to HTML 	Instructor's notes	75%
13	JavaScript Functions & DOM	<ol style="list-style-type: none"> 1. Writing and calling functions 2. Manipulating HTML elements with JavaScript (DOM) 3. Handling user interactions with events 	Instructor's notes	81.25%



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14	Introduction to PHP	1. Syntax and structure of PHP 2. Embedding PHP code in HTML 3. Writing simple PHP scripts for dynamic pages	Instructor's notes	87.5%
15	Introduction to MySQL	1. Creating and managing databases 2. CRUD operations (Create, Read, Update, Delete) 3. Connecting MySQL databases with PHP	Instructor's notes	93.75%
16	Operating System/Linux Basics	1. Basic Linux commands 2. File system navigation 3. Writing and running shell scripts	Instructor's notes	96.88%
17	Responsive Website (WordPress)	1. Building responsive websites using WordPress templates 2. Customizing themes and plugins 3. Optimizing for mobile devices	Instructor's notes	100%

Final Project

Title: Complete Website

Components: HTML, CSS, JavaScript, PHP, MySQL integration.

Lab/Studio Instructor: Ghulam Mustafa

Additional Notes

1. Each session includes both theoretical concepts and practical applications.
2. The suggested readings will be shared as instructor notes or online resources.
3. Focus on project-based learning by applying skills to create a fully functional responsive website.