



Department of Information Technology	LP: OE22801 Rev. No: 00 Date: 08.07.2024
B.E/B.Tech/M.E/M.Tech : B.E/B.Tech Regulation:2022	
PG Specialisation : NA	
Sub. Code / Sub. Name : OE22801 – IT Essentials For Engineers	
Unit : I	

Unit Syllabus: WEB ESSENTIALS

Creating a Website - Working principle of a Website - HTML formatting Elements, Tables, Frames and Forms - CSS , Browser fundamentals - Authoring tools - Types of servers: Application Server - Web Server - Database Server.

Objective: To introduce the concept of Internet, Networks and its working principles

Session No *	Topics to be covered	Ref	Teaching Aids
1	Creating a Website – Working Principle of a website	https://www.w3schools.com/howto/howto_website.asp	Experiential Learning
2	HTML formatting elements	2- ch-4;Pg 123-130	BB/PPT Experimental Learning/Sublime Editor
3	HTML CSS	2- ch -5;Pg 159-176	BB/PPT Experimental Learning/Sublime Editor
4	HTML Tables, Frames and Forms	2- ch -4;Pg 131-146	BB/PPT Experimental Learning/Sublime Editor
5	Browser Fundamentals	2- ch -2;Pg 28-44	BB/PPT Experimental Learning/Sublime Editor
6	Authoring tools	http://websites tips.com/html/tools/	Experiential Learning
7	Application Server	Internet	Experiential Learning
8	Web server	Internet	Experiential Learning
9	Database server	Internet	Experiential Learning
Content beyond syllabus covered (if any): HTML5			

* Session duration: 50 minutes



Sub Code / Sub Name: **OE22801 – IT Essentials For Engineers**
Unit: II

Unit Syllabus: SCRIPTING ESSENTIALS

Need for Scripting languages - Types of scripting languages - Client side scripting - Server side scripting – PHP – Working principle of PHP - PHP Variables - Constants - Operators – Flow Control and Looping – Arrays – Strings - Functions - File Handling - PHP and MySQL - PHP and HTML - Cookies – Simple PHP scripts - Responsive design and media queries.

Objective: To know scripting languages.

Session No *	Topics to be covered	Ref	Teaching Aids
10	Need for Scripting languages - Types of scripting languages	Internet	Experiential Learning
11	Client side scripting - Server side scripting	Internet	Experiential Learning
12	PHP – Working principle of PHP- Structure of PHP – Basic Syntax	2-ch 3;Pg 45-50	BB/PPT/Experimental Learning/Sublime Editor/Codepen
13	PHP - Variables – Constants	2-ch 3;Pg 50-55	BB/PPT/ Experimental Learning/Sublime Editor/Codepen
14	Operators – Flow Control and Looping	2-ch 4;Pg 76-100	BB/PPT/ Experimental Learning/Sublime Editor/XAMPP
15	Arrays – Strings - Functions	2-ch 6;Pg 131-143	BB/PPT/ Experimental Learning/Sublime Editor/XAMPP
16	File Handling - PHP and MYSQL	2-ch 5;Pg 103-113	BB/PPT/ Experimental Learning/Sublime Editor/XAMPP
17	PHP and HTML, Cookies - Simple PHP scripts	2-ch 10;Pg 241-254	BB/PPT/ Experimental Learning/Sublime Editor/XAMPP
18	Responsive Design and media queries.	2-ch 13;Pg 301-304	BB/PPT
Content beyond syllabus covered (if any):			

* Session duration: 50 minutes



Sub. Code / Sub. Name: **OE22801 – IT Essentials For Engineers**

Unit : III

Unit Syllabus: DATABASE ESSENTIALS

Purpose of Database System – Views of Data – Data Models – Database System Architecture- Introduction to Relational database – Relational Models - Keys – SQL fundamentals – Triggers – Embedded SQL – Dynamic SQL – Database Connectivity - E-R Diagrams.

Objective: To understand various concepts of database systems.

Session No *	Topics to be covered	Ref	Teaching Aids
19	Purpose of Database System, Views of Data	3 Ch – 1; Pg : 3 - 6	BB/PPT
20	Data Models, Database System Architecture	3 Ch – 1; Pg : 6 - 9, 23 - 25	BB/PPT
21	Introduction to Relational database, Relational Models	3 Ch – 1; Pg : 39 - 48	BB/PPT
22	Keys	Internet	BB/PPT
23	SQL fundamentals	3 Pg : 57 – 79	BB/PPT/Experiential Learning/SQL certification from Infosys Springboard
24	Triggers	3 Ch – 5; Pg : 180 - 186	BB/PPT
25	Embedded SQL	Internet	BB/PPT
26	Dynamic SQL	Internet	BB/PPT
27	Database Connectivity, E-R Diagrams.	Internet	BB/PPT/Participative Learning/Activity on ER diagram
Content beyond syllabus covered (if any):			

* Session duration: 50 mins



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Unit : IV

Unit Syllabus: OS ESSENTIALS

Introduction to OS concepts, Boot strapping, Process Management – Process Scheduling, Memory Management - Paging and Segmentation, Input Output Input – Output Management, File System. Case study - Unix, Linux, Windows.

Objective: To introduce the concept of Internet, OS and its working principles.

Session No *	Topics to be covered	Ref	Teaching Aids
28	Unix	R4 C.1 - C.10	BB/PPT/Participative Learning/MCQ
29	Linux	Internet	Experiential Learning
30	Windows	R4 B.1 - B.8	BB/PPT/Participative Learning/MCQ
31	Process Management	R4 105 - 148	BB/PPT
32	Process Scheduling	R4 148 - 163	BB/PPT/Participative Learning/MCQ
33	Memory Management	455 - 462	BB/PPT
34	Paging, Segmentation	466 - 473	BB/PPT
35	Input – Output Management	617 - 628	BB/PPT
36	File System	659-670	BB/PPT
Content beyond syllabus covered (if any):			

* Session duration: 50 mins



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Unit : V

Unit Syllabus: MOBILE COMMUNICATION ESSENTIALS

Cell phone working fundamentals - Cell phone frequencies & channels - Digital cell phone components – Generations of cellular networks - Cell phone network technologies / architecture - Voice calls & SMS - Mobile network protocols.

Objective: To understand various applications related to Information Technology.

Session No *	Topics to be covered	Ref	Teaching Aids
37	Cell phone working fundamentals	R1-ch-1; Pg 32-35	BB/PPT
38	Cell phone frequencies & channels	R1-ch-1; Pg 73-74	BB/PPT
39	Digital cell phone components- Hardware and software	R1-ch-3; Pg 207-231	BB/PPT
40	Generations of cellular networks	R1-ch-1; Pg 23-31	BB/PPT
41	Cell phone network technologies architecture Spread spectrum, GSM	R1-ch 2; Pg 114-130	BB/PPT/ Experimental Learning/Android Studio/Eclipse
42	CDMA, CDMA VS GSM	R1-ch-2; Pg 132-137	BB/PPT
43	3G and 4G cellular systems	R1-ch-2; Pg 137-144	BB/PPT
44	Voice calls, SMS	Internet, R1-ch-2; Pg 147-149	BB/PPT/ Experimental Learning/Android Studio/Eclipse
45	Mobile network protocols	Internet	Experiential Learning
Content beyond syllabus covered (if any):			

* Session duration: 50 mins



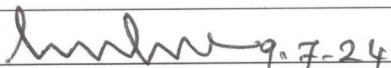

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TEXT BOOKS:

- 1 Julie Meloni and Jennifer Kyrnin, "Sams Teach Yourself - HTML, CSS and Javascript All in one", Third Edition, O'REILLY, 2019.
- 2 Robin Nixon, "Learning PHP, MySQL, JavaScript, CSS & HTML5", Third Edition, O'REILLY, 2014
- 3 Avi Silberschatz. Henry F. Korth and S. Sudarshan, "Database System Concepts" , Seventh edition, MCGraw-Hill 2019.
4. Andrew S. Tanenbaum, - Modern Operating Systems, Fourth Edition, Pearson Education, 2015.

REFERENCES:

- 1 Gottapu Sasibhushana Rao, "Mobile Cellular Communication", Pearson, 2012.
- 2 Ramesh Elmasri, Shamkant B Navathe, Fundamentals of Database Systems, Seventh Edition, Pearson Education, 2016.
- 3 it-ebooks.org
- 4 Abraham Silberschatz, peter Baer Galvin and Greg Gagne - Operating System Concepts, 9th Edition , John Wiley and Sons Inc., 2012.

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Date	08.07.2024	08.07.2024
Remarks *:		
Remarks *:		

* If the same lesson plan is followed in the subsequent semester/year it should be mentioned and signed by the Faculty and the HOD