



Department of Information Technology		LP: IT16403
B.E/B.Tech/M.E/M.Tech : <u>Information Technology</u>	Regulation:2016	Rev. No: 1
PG Specialisation : NA		Date:
Sub. Code / Sub. Name : IT16403 IT ESSENTIALS		14/12/2017
Unit : I		

Unit Syllabus: Introduction

Data and Information, Acquisition of Data – Text – Image – Audio - Video, Internet Application, E-commerce, Business Information Systems, Social Impact of Information Technology.

Objective: To know how to acquire, store and process different types of data.

Session No *	Topics to be covered	Ref	Teaching Aids
1	Data and Information- Types of data ,Data Processing Using Computer	1-ch 1;Pg 1-12	PPT
2	Acquisition of Text Data-Input Units – Representation of Numbers and Characters in computer.	1-ch 2;Pg 19-37	PPT/BB
3	Acquisition of Image Data – Pictures- storage formats –Image Compression	1-ch 3;Pg 41-60	PPT
4	Acquisition of Audio Data- Basics of audio signal, Compressing and Storing audio signals.	1-ch 4;Pg 66-74	PPT
5	Acquisition of Video Data- Capturing Video, Compressing and storing Video.	1-ch 5;Pg 78-84	PPT
6	Internet Application-email- WWW-Accessing pictures, audio, video on web	1-ch 15;Pg 266-284	PPT
7	E-commerce- Types- Architecture- Digital Signatures – Electronic data Interchange	1-ch 17;Pg 309-334	PPT
8	Business Information Systems- computers in business-types of information –Design of operational Information system.	1-ch 16;Pg 290-303	PPT
9	Social Impact of Information Technology.	1-ch 18;Pg 340-348	PPT
Content beyond syllabus covered (if any):			

* Session duration: 50 minutes



Sub. Code / Sub. Name: **IT16403 IT ESSENTIALS**

Unit : II

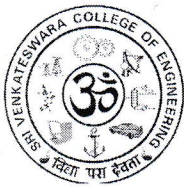
Unit Syllabus: WEB ESSENTIALS

Creating a Website - Working principle of a Website - Browser fundamentals - Authoring tools - Types of servers: Application Server - Web Server - Database Server.

Objective: To understand how the web and web pages work and to master the HTML tags.

Session	Topics to be covered	Ref	Teaching Aids
10	Creating a Website – Working Principle of a website	https://astaxie.gitbooks.io/build-web-application-with-golang/en/03.1.html	PPT
11	HTML formatting elements	2- ch 4;Pg 123-130	PPT
12	HTML CSS	2- ch 5;Pg 159-176	PPT
13	HTML Tables, Frames and Forms	2- ch 4;Pg 131-146	PPT
14	Browser Fundamentals	2- ch 2;Pg 28-44	PPT
15	Authoring tools	https://www.w3.org/standards/agents/authoring	PPT
16	Application Server	Internet	PPT
17	Web server	Internet	PPT
18	Database server	Internet	PPT
Content beyond syllabus covered (if any):HTML5			

* Session duration: 50 mins



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Unit : III

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.

Objective: To understand the need of scripting and to master server side scripting PHP.

Session No *	Topics to be covered	Ref	Teaching Aids
19	Need for Scripting languages - Types of scripting languages	Internet	PPT
20	Client side scripting - Server side scripting	Internet	PPT
21	PHP – Working principle of PHP- Structure of PHP – Basic Syntax	2-ch 3;Pg 45-50	PPT
22	PHP - Variables - Constants	2-ch 3;Pg 50-55	PPT
23	Operators – Flow Control and Looping	2-ch 4;Pg 76-100	PPT
24	Arrays – Strings -	2-ch 6;Pg 131-143	PPT
25	Functions -File Handling	2-ch 5;Pg 103-113	PPT
26	PHP and MySQL - PHP and HTML	2-ch 10;Pg 241-254	PPT
27	Cookies - Simple PHP scripts.	2-ch 13;Pg 301-304	PPT

Content beyond syllabus covered (if any):

* Session duration: 50 mins



Sub. Code / Sub. Name: **IT16403 IT ESSENTIALS**

Unit : IV

Unit Syllabus:

NETWORKING ESSENTIALS

Fundamental computer network concepts - Types of computer networks – Network layers - TCP/IP model
Wireless Local Area Network - Ethernet – WiFi - Network Routing - Switching - Network components.

Objective:

Session No *	Topics to be covered	Ref	Teaching Aids
28	Fundamental computer network concepts	7-ch 2;Pg 21-29	PPT
29	Types of computer networks	7-ch 2;Pg 30-33	PPT
30	Network layers	8-ch 1;Pg 37-40	PPT
31	TCP/IP model	8-ch 1;Pg 41-43	PPT
32	Wireless Local Area Network	8-ch 4;Pg 292-299	PPT
33	Ethernet, WiFi	7-ch 12;Pg 372-375 https://en.wikipedia.org/wiki	PPT
34	Network Routing-Principles,Distance Vector routing	8-ch 5;Pg 350-370	PPT
35	Network Routing-Link State routing	8-ch 5;Pg 371-380	PPT
36	Switching	7-ch 14;Pg 431-446	PPT
Content beyond syllabus covered (if any):			

* Session duration: 50 mins



Sub. Code / Sub. Name: **IT16403 IT ESSENTIALS**

Unit : V

Unit Syllabus: **NETWORKING ESSENTIALS**

Fundamental computer network concepts - Types of computer networks – Network layers - TCP/IP model – Wireless Local Area Network - Ethernet – WiFi - Network Routing - Switching - Network components.

Objective:

Session No *	Topics to be covered	Ref	Teaching Aids
37	Cell phone working fundamentals	32-35	PPT
38	Cell phone frequencies & channels		PPT
39	Digital cell phone components-Hardware and software components	207-231	PPT
40	Generations of cellular networks	23-31	PPT
41	Cell phone network technologies architecture Spread specturm ,GSM	8-ch 3;Pg 114-130	PPT
42	CDMA,CDMA VS GSM	132-137	PPT
43	3G and 4G cellular systems	137-144	PPT
44	Voice calls		PPT
45	SMS	147-149	PPT

Content beyond syllabus covered (if any):

* Session duration: 50 mins



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TEXT BOOKS:

- 1. V. Rajaraman, "Introduction to Information Technology", PHI Learning , Second Edition, 2013
- 2. Deitel and Deitel, "Internet and World Wide Web How to program" Fourth Edition, Prentice Hall, 2010.
- 3. Pei Zhen, Lionel M.Ni "Smart Phone and Next Generation Mobile Computing ", First Edition, Morgan Kaufmann, 2006.
- 4. Robin Nixon, "Learning PHP, MySQL, JavaScript, CSS & HTML5" Third Edition, O'REILLY, 2014.

REFERENCES:

- 5. Behrouz A. forouzan, "Data communication and networking" Tata McGraw-hill, Fifth edition, 2017
- 6. Andrew. S. Tannenbaum, "Computer Networks", PHI, Fifth Edition, 2010.
- 7. it-ebooks.org

	Prepared by	Approved by
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Date	14/12/2017	14/12/2017
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

** Same lesson plan will be followed for the even semester 2018-2019.*

P. Nirmala
17/12/18

DR. V. VIDHYA
17/12/17

