

DEPARTMENT OF INFORMATION TECHNOLOGY
NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR

Semester: 3rd
Internet & Web Design

Course Code **L T P Credits**
IT 301 **1 0 0** **1**

UNIT I

INTRODUCTION:

The Internet: Computer Networks, Internet Infrastructure, TCP/IP, IP Address, IPv4, IPv6, internet Protocols and Services, Domain Name System, Electronic Mail, HTTP/HTTPS, FTP, Telnet, Web Browsers, Web Server,

UNIT II

HTML AND CSS:

Basic Tags of HTML, HTML5 , Formatting of Text, Working with Images, Multimedia, Links, Lists, Tables, Frames, Forms. Concept of CSS3 : Creating Style Sheet, Properties, Styling, Working with block elements, objects, Lists and Tables, Id and Class, Box Models, Grouping, Dimension, Display, Positioning, Floating, Align, Pseudo class, Navigation Bar, Color, Page Layout and Site Design.

UNIT III

SCRIPTING:

JavaScript Variables and Data Types, Object-Based Programming, Message box in JavaScript, JavaScript with HTML, Events, Event Handlers, Forms, Forms Array, php scripting.

UNIT IV

BACKEND CONNECTIVITY:

CGI scripting, R scripts overview, Connectivity to Database, MS-SQL, MySQL server, Storing, Retrieving and Modifying Data in Database through web forms.

UNIT V

WEB PUBLISHING AND INTERNET SECURITY:

Installing and web hosting using popular web servers, IIS, Apache, Creating the Web Site, Overview of Internet Security, Firewalls, Cryptography, Search Engine Optimization Techniques.

Text Books:

1. Dietel & Dietel "Internet & Web Designing".

Reference Books:

1. Greenlaw R and Hepp E "Fundamentals of Internet and www".
2. B. Underdahle and K.Underdahle, "Internet and Web Page / WebSite Design", IDG Books India (P) Ltd.
3. D. Comer, "The Internet Book", Prentice Hall of India.

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Course	Code	L	T	P	Credits
Internet & Web Design Lab	IT 302 P	0	0	4	2

List of Experiments:

1. Develop and demonstrate an HTML document using HTML tags.
2. Working with lists and tables.
3. Working with frames and forms.
4. Develop and demonstrate an HTML that illustrates the use of style sheet, ordered list, table, borders, padding, colour and <spam> tag.
5. Develop an HTML file that includes JAVA script code.
6. To write functions in HTML, validate using regular expressions.

Course	Code	L	T	P	Credits	
Systems & Signals	IT 305	3	1	0	4	UNI TI

INTRODUCTION TO SIGNALS:

Classification of signal: Deterministic and non-deterministic, periodic and aperiodic, even and odd signals, energy and power signals, elementary signals: exponential, sinusoidal, impulse, step, ramp, pulse, square wave signals. Time shifting, time scaling and time-inversions of signals.

UNIT II

LINEAR TIME INVARIANT SYSTEMS:

Continuous time system, basic system properties like causality, time invariance, stability, linearity, memory, order of system, interconnection of systems, Linear time invariant systems, characterization, unit impulse response, convolution, properties of LTI systems, linear constant co-efficient differential equations and system description.

UNIT III

FOURIER ANALYSIS OF SIGNALS AND SYSTEMS:

Frequency domain representation of signal, Fourier series of periodic signals and its properties, Fourier transform of aperiodic signals and its properties, Fourier transform of periodic signals, convolution in time and frequency domain, energy and signals, Parseval's theorem, energy spectral density and its properties, Transfer function of LTI system

UNIT IV

THE LAPLACE TRANSFORM:

Definition, relation between Laplace and Fourier transforms, region of convergence, properties of Laplace transform, initial and final value theorems, convolution, transfer function of LTI system, concept of poles and zeroes, stability criteria, Inverse Laplace transform

UNIT V

RANDOM VARIABLE THEORY AND RANDOM SIGNALS:

Probability, conditional probability, statistical independence, random variables, discrete and continuous random variables, probability distribution and probability density functions, statistical averages of random variables. Some important density functions.

UNIT VI

RANDOM PROCESSES AND CHARACTERIZATION:

Ensemble and time averages, stationary and non-stationary random process, wide sense stationary random process, autocorrelation and cross-correlation functions, response of LTI systems to random inputs, noise and its types, white noise, signal to noise ratio of LTI systems.

Text Books:

1. Signals and Systems by Ziemann, Tranter, Fannin
2. Signals and Systems by Sanjay Sharma

Reference Books:

1. Signals and Systems by A Populis
2. Random processes and Systems by A Populis
3. Signals and Systems by S. Hykin