

MC117-Internet and Web Technologies

Objective:

This course is intended to teach the basics involved in publishing content on the World Wide Web. This includes the 'language of the Web' – HTML, the fundamentals of how the Internet and the Web function, a basic understanding of graphic production with a specific stress on creating graphics for the Web, and a general grounding introduction to more advanced topics such as programming and scripting. This will also expose students to the basic tools and applications used in Web publishing.

Learning Outcomes:

The student will be able to:

- Analyze a web page and identify its elements and attributes.
- Create web pages using XHTML and Cascading Style Sheets.
- Build dynamic web pages using JavaScript (Client side programming).
- Create XML documents and Schemas.
- Build interactive web applications using AJAX.

UNIT-I

Networking Protocols and Internet: Introduction, Protocols in Computer Communications, the OSI Model, OSI Layer Functions.

Why Internet Working?, Problems in Internet Working, Dealing with Incompatibility Issues, A Virtual Network, Internet Working Devices, Repeaters, Bridges, Routers, Gateways, A Brief History of the Internet, Growth of the Internet.

UNIT-II

WWW, HTTP, TELNET:

Introduction, Brief History of WWW, the Basics of WWW and Browsing, Hyper Text Markup Language, Common Gateway Interface, Remote Login.

UNIT-III

JavaScript and AJAX:

Introduction, JavaScript, Basic Concepts, Controlling JavaScript Execution, Miscellaneous Features, JavaScript and Form Processing, Pop-up Boxes.

AJAX: Introduction, How AJAX Works? , Life without AJAX, AJAX Coding, Life with AJAX.

UNIT-IV

Introduction to XML:

What is XML?, XML versus HTML, Electronic Data Interchange, XML Terminology, Introduction to DTD, Document-Type Declaration, Element-Type Declaration, Attribute Declaration, Limitations of DTDs, Introduction to Schema, Complex Types, Extensible Style sheet Language Transformations, Basics of Parsing, JAXP

UNIT-V

Creating Good Web Pages:

Introduction, Top Level Navigation, Creating Sample Layouts, Metaphor, Theme, and Storyboard, Screen Resolution, 3-Column Layout, Using Frameworks, Using Graphics, Usability for the Handheld Devices, Creating Multilingual Web sites, XHTML and Web Browser Compatibility Issues, Designing the Basic Elements of a Home Page.

TEXT BOOKS:

1. Achyut Godbole, Atul Kahate "Web Technologies: TCP/IP, Web/Java Programming, and Cloud Computing", Third Edition, McGraw Hill Education.

Reference Books:

1. Deitel, Deitel, Goldberg, "Internet & World Wide Web How to Program", Third Edition, Pearson Education, 2006.
2. Raj Kamal, "Internet and Web Technologies", Tata McGraw-Hill.