

<b>Module Title:</b>	<b>Web Engineering and Applications</b>
<b>Module ID:</b>	<b>CAP 311</b>
<b>Prerequisite:</b>	<b>CAP 211</b>
<b>Level:</b>	<b>5</b>
<b>Credit Hours:</b>	<b>3 (2+2+0)</b>

### **Module Description:**

Detailed study of the engineering methods and technologies for building highly interactive web sites and portals for e-commerce and other web-based applications. Engineering principles for building web sites that exhibit high reliability, usability, security, availability, scalability and maintainability are presented. Methods such as client-server programming, component-based software development, middleware, and reusable components are covered. Student will learn technologies such as HTML, JavaScript and XML. A development platform (e.g. ASP.Net or Java or PHP ) is covered by the course and used by students to develop a large web application in phases. Employing analysis and design techniques and HCI concepts are important issues in this project.

### **Module Aims:**

The aim of this course is to be familiar with Front-end development technologies including HTML, CSS, and JavaScript.

### **Learning Outcomes:**

- The student is expected to be able to: Understand Web platform and fundamentals of Internet Technology;
- Understand the basic Internet services, design and publish simple web sites;

- Be familiar with the following: Front-end development technologies including HTML, CSS, and JavaScript;
- Ability to create a static and dynamic web site.

List of Topics	No. of Weeks	Contact Hours
Chapter 1: Internet Overview, history.	1	3
Chapter 2 Introduction ( History of the Internet - Basic concepts ) Client Side scripting Vs Server Side Scripting	1	3
Chapter 3: HTML language Introduction to HTML language (Heading - Formatting ) HTML Lists – Images – Lists – Tables Forms – Frames – Iframes The HTML voice and video code - meta Element	3	9
Chapter 4 : Cascading Style Sheets (CSS) Ways of Inserting CSS CSS Background – CSS Font – CSS Text Multiple Style Sheets CSS Padding – CSS Margin – CSS Border CSS List – CSS Links CSS Pseudo-Classes – CSS Position – CSS Layer CSS Layers – CSS Float	2	6
Chapter 5 : Java Script Basics of java script statements - variables - If ...Else - Functions - For .. loop Array – intro to object – string	2	6
Chapter 6:PHP language Install and configure a Web server Install and configure PHP Install and configure MySQL Create basic PHP scripts and PHP code blocks Variables and constants Data types Expressions and operators Casting data types of variables	3	9

Operator precedence		
Chapter 7:XML <ul style="list-style-type: none"> <li>• Introduction to XML</li> <li>• Basic XML concepts</li> <li>• Defining XML Data Formats.</li> <li>• Query XML Data</li> </ul>	3	9

**Textbook:**

Java for the Web with Servlets, JSP, and EJB, Budi Kurniawan, 2002, New Riders Press.

HTML and CSS: Visual QuickStart Guide , Castro; Hyslop, Peachpit Press.  
Java 2: The Complete Reference, Herbert Schildt, Osborne/McGraw Hil