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| **Web Engineering and Applications** | **Module Title:** |
| **CAP 311** | **Module ID:** |
| **CAP 211** | **Prerequisite:** |
| **5** | **Level:** |
| **3 (2+2+0)** | **Credit Hours:** |

**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.

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| 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 * Operator precedence | 3 | 9 |
| Chapter 7:XML   * Introduction to XML * Basic XML concepts * Defining XML Data Formats. * Query XML Data | 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