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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. ofWeeks | 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 scriptstatements - 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