Code	Subject Title	Cr. Hrs	Semester
IT-205	Web Engineering	3	IV
Year	Discipline		
2	Information Technology		

Objectives

This course provides an introduction to the theory and implementation of interactive client side and server side Web programming. The course will begin with Markup languages, Cascading Style sheets, JavaScript and move on to interfacing them with server side programming. The major focus of the course will be on server side dynamic web application development using Java Server Pages and Servlets technology. This course covers design, development and deployment of dynamic and interactive web applications. The following topics will be covered in this course: Overview of markup languages including XML, cascading style sheets (CSS), clients side scripting languages (Java Scripting), web application designing, web application architecture, http client request and http server response, web application n-tier architecture and layered architecture, server side programming using JSP and Servlets, Servlets and JSP overview, handling client request, http request headers, generating the dynamic sever response, http status codes, http response headers, session tracking, handling cookies, implementing session tracking, understanding session tracking API, encoding URLs, implementing a shopping cart, server side include, redirection, servlet chaining, JSP scripting elements, JSP directives, including files and applets in JSP pages, using Java Beans components in JSP pages, comparison of JSP and Servlets, MVC architecture, integrating servlets and JSP, JSP expression language. This course also includes overview of different frameworks and technologies used in web applications development: AJAX, Hibernate, Struts, and Java Server Faces.

Prerequisites

HTML, Java Programming, Object Oriented Programming

Text Book
XML How to Program by Deitel
JavaScript by Wrox
Core Servlets and Java Server Pages by Marty Hall (Sun Microsystems)

Reference Books
- Professional Java Server Programming by Wrox
- Ivan Bayross, *JavaScript, Perl, CGI*, BPB Publications
- http://www.w3c.org/
- http://www.w3schools.com/
- http://www.coreservlets.com/
- http://courses.coreservlets.com/Course-Materials/csajsp2.html
- http://courses.coreservlets.com/Course-Materials/scwcd.html
- http://courses.coreservlets.com/Course-Materials/msajsp.html
- http://www.coreservlets.com/JSF-Tutorial/
- http://courses.coreservlets.com/Course-Materials/ajax.html
- http://courses.coreservlets.com/Course-Materials/struts.html
- http://courses.coreservlets.com/Course-Materials/java5.html

- http://java.sun.com/
- http://www.theserverside.com/
- http://java.sun.com/docs/books/tutorial