CP5091 WEB ENGINEERING

DETAILED SYLLABUS

UNIT I INTRODUCTION TO WEB ENGINEERING

Motivation, Categories of Web Applications, Characteristics of Web Applications. Requirements of Engineering in Web Applications- Web Engineering-Components of Web Engineering-Web Engineering Process-Communication-Planning.

UNIT II WEB APPLICATION ARCHITECTURES & MODELLING WEB APPLICATIONS

Introduction- Categorizing Architectures- Specifics of Web Application Architectures, Components of a Generic Web Application Architecture- Layered Architectures, 2-Layer Architectures, N-Layer Architectures-Data-aspect Architectures, Database-centric Architectures- Architectures for Web Document Management- Architectures for Multimedia Data- Modeling Specifics in Web Engineering, Levels, Aspects, Phases Customization, Modeling Requirements, Hypertext Modeling, Hypertext Structure Modeling Concepts, Access Modeling Concepts, Relation to Content Modeling, Presentation Modeling, Relation to Hypertext Modeling, Customization Modeling, Modelling Framework-Modeling languagesAnalysis Modeling for Web Apps-The Content Model-The Interaction Model-Configuration Model.

UNIT III WEB APPLICATION DESIGN

Design for WebApps- Goals-Design Process-Interactive Design- Principles and GuidelinesWorkflow Preliminaries-Design Steps- Usability- Issues- Information Design- Information Architecture- structuring- Accessing Information-Navigation Design- Functional Design-Wep App Functionality- Design Process- Functional Architecture- Detailed Functional Design.

UNIT IV TESTING WEB APPLICATIONS

Introduction-Fundamentals-Test Specifics in Web Engineering-Test ApproachesConventional Approaches, Agile Approaches- Testing concepts- Testing Process -Test Scheme- Test Methods and Techniques- Link Testing- Browser Testing-Usability TestingLoad, Stress, and Continuous Testing, Testing Security,

Test-driven Development, -Content Testing-User Interface testing-Usability Testing-Compatibility Testing-Component Level Testing-Navigation Testing-Configuration testing-Security and Performance Testing- Test Automation.

UNIT V PROMOTING WEB APPLICATIONS AND WEB PROJECT MANAGEMENT

Introduction-challenges in launching the web Application-Promoting Web ApplicationContent Management-Usage Analysis-Web Project Management-Challenges in Web Project Management-Managing Web Team- Managing the Development Process of a Web Application- Risk, Developing a Schedule, Managing Quality, Managing Change, Tracking the Project. Introduction to node JS - web sockets.

OBJECTIVES:

- Understand the characteristics of web applications
- Learn to Model web applications
- Be aware of Systematic design methods
- Be familiar with the testing techniques for web applications

REFERENCES:

1. Chris Bates, ―Web Programming: Building Internet Applications‖, Third Edition, Wiley India Edition, 2007.
2. Gerti Kappel, Birgit Proll, ―Web Engineering‖, John Wiley and Sons Ltd, 2006.
3. Guy W. Lecky-Thompson, ―Web Programming‖, Cengage Learning, 2008.
4. John Paul Mueller, ―Web Development with Microsoft Visual Studio 2005‖, Wiley Dream tech, 2006.
5. Roger S. Pressman, David Lowe, ―Web Engineering‖, Tata McGraw Hill Publication, 2007.