

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

M.C.A. (5 th Semester)

Proposed Syllabus

Paper : 503 : **Advanced Java Programming**

Effective From June 2011

JDBC

1. **Java Database Connectivity**
 - 1.1 Types of JDBC Drivers
 - 1.2 Connecting with databases like MS Access, MsSQL, MySQL and Oracle
 - 1.3 Connection and Resultset Objects
 - 1.4 Interaction with Database using SQL Queries
 - 1.5 Calling Stored Procedures
 - 1.6 Managing Transactions
 - 1.7 JDBC Connection Pooling

J2EE Essentials

2. **Servlets**
 - 2.1 Introduction to Servlets
 - 2.2 Overview of servlet technology
 - 2.2.1 The servlet API
 - 2.2.2 HttpServlet Class
 - 2.2.3 HttpServletRequest Interface
 - 2.2.4 HttpServletResponse Interface
 - 2.3 Handling HTTP GET and POST requests
 - 2.4 Session Tracking
 - 2.5 Multitier Application
3. **Remote Method Invocation (RMI) - An Introduction**
 - 3.1 Introduction to RMI
 - 3.2 Defining Remote Interface
 - 3.3 Implementing the Remote Interface
 - 3.4 Define the client
 - 3.5 Compile and Execute the Server and client
4. **Java Server Pages**
 - 4.1 Introduction to JSP
 - 4.2 JSP Elements - Directives, Scripting element, Action Element
 - 4.3 Scriptlets
 - 4.4 Deploying JSP Applications
5. **Enterprise Java Beans**
 - 5.1 Introduction to Beans and EJB 3.0
 - 5.2 Session beans & Entity Beans
 - 5.3 Stateful and Stateless Session Beans
 - 5.4 Writing Entity Beans
 - 5.5 Introduction to application servers - WebLogic, JRun, Tomcat, WebSphere
 - 5.6 Deployment of Beans

J2ME

6. **J2ME**
 - 6.1 Overview of J2ME
 - 6.2 Downloading & Installing J2ME Toolkit
 - 6.3 Building application for MIDP
 - 6.4 Developing simple J2ME applications
 - 6.5 Working with KToolbar

REFERENCES

1. **JAVA - How to Program - Third Edition - Deitel & Deitel -Addition Wesley**
2. **Java Server and Servlets : Building Portable Web Applications - Peter Rossbach & Hendrick Schreiber - Addition Wesley**
3. **Java Programming Advance Topics - Joe Wigglesworth and Paula Lumby -Thomson Learning**
4. **Core Java Volume - II Advance Features - Cay S. Horstmann & Garry Cornell -Sun Microsystems Press (Prentice Hall)**
5. **The Authorative Solution - James Goodwill - Developing Java Servlets - Sams - Techmedia**
6. **Java Servlet Programming - Jason Hunter - O'reilly**
7. **Enterprise JavaBeans, Fourth Edition - Richard Monson-Haefel, Bill Burke, [Sacha Labourey](#) - O'reilly**
8. **Jdbc Database Access With Java - Graham Hamilton, Rick Cattell, Maydene Fisher - Addison Wesley Publishing Company**

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Proposed Syllabus

Paper : 504 : Advanced Web Technology (ASP.NET Using c#)

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1. Introduction to ASP.NET

- 1.1. What is ASP.NET
- 1.2. Compiled code
- 1.3. The Common Language Runtime
- 1.4. True Object Oriented
- 1.5. Error Handling
- 1.6. Event Driven Programming

2. Introduction to C#

- 2.1. C# and .NET Architecture
- 2.2. C# Basics
- 2.3. Object-Oriented C#

3. Server Controls.

- 3.1. Post back
- 3.2. Data Binding
- 3.3. Web-Server Control
- 3.4. Html Server Control
- 3.5. Validation Control

4. Database Access.

- 4.1. Error Handling
- 4.2. Database Access Using ADO.NET

5. Advanced ASP.NET

- 5.1. Communication with Web Browser
- 5.2. Response Object
- 5.3. Cookies
- 5.4. Query-String and Form Collection

6. Web.Config

- 6.1. Session Management and Variable Scope
- 6.2. Page SubClassing
- 6.3. User Control
- 6.4. Advance Data Banding
 - 6.4.1. data Gride

- 6.4.2. Data Binding Events
- 6.4.3. Data List
- 6.4.4. Repeaters

7. **Web Services.**

- 7.1. Basics of Web Services
- 7.2. Interacting with web Services
- 7.3. Web Services technologies

8. **Adding E-Commerce Essentials.**

- 8.1. XML Tools
 - 8.1.1. XML TextReader
 - 8.1.2. XML TextWriter
 - 8.1.3. XML Document
 - 8.1.4. Dataset
- 8.2. Email

9. **Debugging and Optimization.**

- 9.1. Debugging ASP.NET Application – Tracing
- 9.2. Optimization
- 9.3. Optimizing using catching

REFERENCES

1. **Professional ASP.NET 1.1** - Bill Evjen, Devin Rader, Farhan Muhammad, Scott Hanselman, Srinivasa Sivakumar – Wrox.
2. **Beginning ASP.NET 1.1 with Visual C# .NET 2003** - Chris Hart, Chris Ullman, Dave Sussman, John Kauffman – Wrox
3. **Professional ADO.NET** - Bipin Joshi, Donny Mack, Doug Seven, Fabio Claudio Ferracchiati, Jan D Narkiewicz, John McTanish, Julian Skinner, Kevin Hoffman, Matt Milner, Paul Dickinson, Warren Wiltsie – Wrox.
4. **Magic of ASP.NET with C#** – Kumar Sanjeev, Shibi Panikkar # - Firewall Media
5. **Special Edition Using ASP.NET** – Richard Leinecker – Pearson Education.
6. **ASP.NET A Beginner's guide**– Dave Mercer – TMH
7. **Pro Asp.Net in C#: From Professional to Expert** – John Franklin – Apress, Inc..
8. **ASP.NET for Developers** – Amundsen - Tecmedia
9. **Developing Web Applications with ASP.NET and C#** - Hank Meyne - Welly
10. **Beginning ASP.NET 1.1** – Chris Hart, Chris Ullman, David Sussman, John Kauffman - Wrox.

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Proposed Syllabus

Paper : 505 : **Open Source Web Based Programming(PHP/MySql)**

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1. **Introduction to LINUX**
2. **LINUX Architecture**
3. **Installation of PHP, MySql and Apache Web Server**
4. **Introduction to Advanced Web Programming with PHP**
5. **Writing PHP Programs**
6. **Loops and Arrays**
7. **PHP functions**
 - 7.1 String Functions
 - 7.2 Array Functions
 - 7.3 Mathematical Functions
 - 7.4 Graphics Library (GD Support)
 - 7.5 File System Functions
 - 7.6 Date and Time Functions
 - 7.7 Misc. Function
8. **Error Handling**
9. **Object Oriented Features of PHP**
10. **Classes and Objects Use Of constructors Serialization**
11. **File and Directory Handling**
12. **MySQL Database Server**
 - 12.1 Configuring the MySQL Server
 - 12.2 Starting MySQL Server
 - 12.3 MySQL Tables
 - 12.4 Displaying MySQL Database
 - 12.5 Adding and removing user access
 - 12.6 Checking and fixing database
13. **Advance PHP programming**
 - 13.1XML
 - 13.2Mail
 - 13.3PHP-generated Adobe Acrobat documents
14. **Introducing Ajax**
 - 14.1 What is Ajax?
 - 14.2 Ajax Requirements
15. **Ajax Basics**
 - 15.1 HTTP Request and Response Fundamentals
 - 15.2 The XMLHttpRequest Object XMLHttpRequest Methods
 - 15.3 XMLHttpRequest Properties
 - 15.4 Cross-Browser Usage Sending a Request to the Server
16. **PHP and Ajax**
 - 16.1 PHP and Ajax Client-Driven Communication

- 16.2 Server-Side Processing Expanding and Contracting Content
- 16.3 Auto-Complete
- 16.4 Form Validation

17. Database-Driven Ajax

- 17.1 Connecting to MySQL
- 17.2 Querying a MySQL Database
- 17.3 MySQL Tips and Precautions
- 17.4 Putting Ajax-Based Database Querying to Work

18. Forms Ajax: GET vs. POST Passing Values Form Validation

19. Images Uploading Images Displaying Images Loading Images

Reference Books :

1. Beginning PHP 5 Databases - Christopher Scollo, Harish Rawat, Deepak Thomas, Chris Lea, Sanjay Abraham, Andrew Hill & Jim Hubbard - Wrox Press Inc, October 2000, ISBN 1-8610-0373-0
2. PHP MySQL Website Programming - Chris Lea, Mike Buzzard, Jessey White-Cinis & Dilip Thomas - Wrox Press Inc, Mar 2003, ISBN 1-861008-27-9
3. PHP Black Book - Peter Moulding - The Coriolis Group, October 2001, ISBN 0-7645-3561-7
4. Documentation from <http://www.php.net/docs.php>
5. MySQL/PHP Database Applications - Jay Greenspan & Brad Bulger - John Wiley & Sons, January 2001, ISBN 0-7645-3537-4
6. PHP MySQL Website Programming: Problem - Design - Solution - Chris Lea, Mike Buzzard, Jessey White-Cinis & Dilip Thomas - Apress, 2003, ISBN 1-59059-150-X
7. Beginning PHP 5, Apache, and MySQL Web Development - Elizabeth Naramore, Jason Gerner, Yann Le Scouarnec, Jeremy Stolz, Michael K. Glass- Wrox Press, October 2000, ISBN 0-1308-8903-2
8. PHP MySQL Website Programming - Chris Lea, Mike Buzzard, Jessey White-Cinis & Dilip Thomas - Wrox Press Inc, Mar 2003, ISBN 1-861008-27-9
9. SAMS Teach Yourself PHP MySQL and Apache in 24 Hours - Julie C Meloni- Sams, Dec 2002, ISBN 067232489X
10. Beginning Ajax with PHP -Lee Babin - Apress, oct 2006, ISBN 1590596676