

## 2015 SYLLABUS

<b>I SEMESTER</b>			
<b>C 3</b>	<b>ADVANCED JAVA PROGRAMMING</b>		<b>15PCSC13</b>
<b>Hrs / Week : 6</b>	<b>Hrs / Sem : 90</b>	<b>Hrs / Unit : 18</b>	<b>Credits : 5</b>

### **UNIT-I- APPLET AND SWING**

Introduction to Applet and swing – Creating Applet in Java, Identifying various stages of an Applet life Cycle, Graphics method in Java , the AWT control Components, Layout Manager ,A Tour of Swing.

### **UNIT-II-JDBC**

**Understanding JDBC Programming Basics** : Setting up your first JDBC Query - Connecting to Databases with JDBC - Building JDBC Statements – Working with Resultsets – Understanding JDBC Datatypes.

### **UNIT-III-SERVLET**

Background – The Life cycle of a Servlet – A Simple Servlet – The Servlet API – The javax.servlet Package – Reading Servlet Parameters – The javax.servlet.http Package – Handling HTTP Requests and Responses – **Cookies – Session Tracking**.

### **UNIT-IV-RMI & BEANS**

Overview of Java RMI - A Simple Client/Server applications using RMI - Introduction to Bean- Advantages of Java Bean- **Application Builder Tools** – BDK - JAR files – Introspection - Developing Simple Bean – **Using Bound Properties** – **Using the BeanInfo Interface – Constrained Properties** - Persistence – Customizers –Java Beans API.

### **UNIT-V-JSP**

Introduction – **What and Why use JSP** – JSP Overview : The Problem with Servlets – The anatomy of a JSP Page – **JSP Processing - JSP Application Development : Generating Dynamic Content** – Building Web application with Java Server pages and Servlets.

### **TEXT BOOKS:**

1. Unit I,III & IV: Herbert Schildt, Java 2 complete Reference, Tata McGraw Hill.
2. Unit II : Todd M. Thomas, Java Data Access, M&T Books.
3. Unit V: Hans Bergsten, “Java Server Pages”, SPD O’Reilly.

### **REFERENCE BOOKS:**

1. Ken Arnold, Crosling Homles, “The Java Programming Language” Pearson Education III Edition.
2. Harley Hahn, The Internet – Complete Reference , Tata McGraw Hill 1997.
3. Advance Java Programming – AmitK.Mishra.
4. Black Book- Java Programming \_Dreamtech.

<b>II SEMESTER</b>			
<b>C8</b>	<b>DATA MINING AND DATA WAREHOUSING</b>		<b>15PCSC24</b>
<b>Hrs / Week : 6</b>	<b>Hrs / Sem : 90</b>	<b>Hrs / Unit : 18</b>	<b>Credits : 5</b>

#### **UNIT - I**

Introduction : Data mining – Data mining functionalities – kinds of patterns can be mined – classification – major issues. Data warehouse – A multidimensional data model – Data warehouse architecture – Data warehouse implementation – From data warehouse to data mining.

#### **UNIT - II**

Data Processing : Data preprocessing – Data cleaning – Data Integration and Transformation – Data Reduction – Discretization and concept hierarchy generation – Data mining primitives – Data mining Task

#### **UNIT - III**

Association Rules : Association Rule Mining – Mining single dimensional Boolean association rules from transactional databases –. Classification and prediction – Issues regarding classification and prediction – Bayesian classification Classification by Back propagation – classification based on concepts from association rule mining

#### **UNIT - IV**

Data mining Techniques : Cluster Analysis-A categorization of Major clustering methods-Partitioning methods Hierarchical methods -Grid based methods - Model based clustering methods Density - based methods.

#### **UNIT - V**

Applications : Applications and Trends in Data Mining – Data mining system Products and Research prototypes – Additional themes on Data mining – Social Impacts of Data Mining – Trends in Data mining Mining Spatial Databases – Mining Time series and sequence data – Mining the World wide web.

**TEXT BOOK:**

Jiwei Han, Michelen Kamber, "Data Mining Concepts and Techniques", Morgan Kaufmann Publishers an Imprint Of Elsevier, 2001.(Chapters 1,2,3,4.1,6.1,6.2,7,8,9.2,9.4,9.6,10)

**REFERENCE BOOKS:**

1. ArunK.Pujari, Data Mining Techniques, Universities Press(India) Limited, 2001.
2. George M. Marakas, Modern Data warehousing, Mining and Visualization: core concepts, Printice Hall, FirstEdition, 2002.
3. PangNing Tan, Michael Steinbach, Vipin Kumar, Introduction to Data Mining, Pearson, 2008.
4. Soman K. P, ShyamDiwakar, V. Ajay, Data Mining, Prentice Hall, 2008.

<b>IV SEMESTER</b>			
<b>C12</b>	<b>CLOUD COMPUTING</b>		<b>15PCSC41</b>
<b>Hrs / Week : 6</b>	<b>Hrs / Sem : 90</b>	<b>Hrs / Unit : 18</b>	<b>Credits : 5</b>

### **UNIT-I Fundamentals of Cloud Computing**

Cloud computing – History of Cloud Computing – Cloud Architecture – Cloud Storage – Why cloud computing Matters – Advantages of Cloud computing – Disadvantages of Cloud Computing – Companies in the Cloud Today – Cloud Services – Web-Based Application – Pros and Cons of Cloud Service Development – Types of Cloud Service Development – Software as a Service – Platform as a Service – Web Services

### **UNIT-II Cloud Services**

Collaborating on Calendars, Schedules and Task Management – Exploring Online Scheduling Applications – Exploring Online Planning and Task Management – Collaborating on Event Management – Collaborating on Contact Management – Collaborating on Project Management – Collaborating on Word Processing – Collaborating on Databases – Storing and Sharing Files – Evaluating Web Mail Services – Evaluating Web Conference Tools – Collaborating via Social Networks and Groupware – Collaborating via Blogs and Wikis.

### **UNIT – III Introduction to Big Data**

Introduction to Big Data Platform – Challenges of Conventional Systems – Intelligent data analysis – Nature of Data - Analytic Processes and Tools - Analysis Vs Reporting - Modern Data Analytic Tools - Statistical Concepts: Sampling Distributions - Re-Sampling - Statistical Inference - Prediction Error

### **UNIT – IV Data Analysis**

Regression Modeling - Multivariate Analysis – Bayesian Methods – Bayesian Paradigm - Bayesian Modeling - Inference and Bayesian Networks - Support Vector and Kernel Methods - Analysis of Time Series: Linear Systems Analysis - Nonlinear Dynamics - Rule Induction - Fuzzy Logic: Extracting Fuzzy Models from Data - Fuzzy Decision Trees

## **UNIT – V Search Methods and Visualization**

Search by simulated Annealing – Stochastic, Adaptive search by Evaluation – Evaluation Strategies – Genetic Algorithm – Genetic Programming – Visualization – Classification of Visual Data Analysis Techniques – Data Types – Visualization Techniques – Interaction techniques – Specific Visual data analysis Techniques

### **TEXT BOOKS :**

1. Michael Miller, Cloud Computing : Web-Based Applications That Change the Way You Work and Collaborate Online, Que Publishing, August 2008.
2. Michael Berthold, David J. Hand, “Intelligent Data Analysis”, Springer, 2007.

### **REFERENCE BOOKS :**

1. Haley Bear, Cloud Computing Best Practices for Managing and Measuring Processes for On-demand Computing, Applications and Data Centers in the Cloud with SLAs.
2. Anand Rajaraman and Jeffrey David Ullman, “Mining of Massive Datasets”, Cambridge University Press, 2012.
3. Bill Franks, “Taming the Big Data Tidal Wave: Finding Opportunities in Huge Data Streams with Advanced Analytics”, John Wiley & sons, 2012.

**DEPARTMENT OF COMPUTER SCIENCE (PG)**

**Non-Major Elective Course offered to Other Major PG Students**

**IV SEMESTER**

<b>E(N)</b>	<b>INTERNET CONCEPTS AND WEB DESIGN</b>	<b>15PCSN31</b>	
<b>Hrs/Week: 6</b>	<b>Hrs/Sem: 90</b>	<b>Hrs/Unit: 18</b>	<b>Credits: 5</b>

**UNIT-I**

History of HTML-HTML document-HEAD and BODY sections-Title, Prologue, Links-Comment line-Designing the BODY section-Aligning the headings-HR tag-Paragraphs-Tab settings-Images and Pictures-Embedding PNG format images.

**UNIT-II**

Ordered and Un Ordered lists-Nested Lists-Headings in a list-Table Handling-Table Creation in HTML-Width of the table and Cells-Cell spanning-Coloring cells-column specification-DHTML and Style sheets-Defining styles-Elements of styles-Linking a style sheet to a HTML document-In -line styles-External style sheets-Internal style sheets-Multiple styles.

**UNIT-III**

Frames-Frameset definitions-Frame definitions-Nested framesets-Forms-Action attribute-Method attribute-Enctype attribute-Check Boxes-Radio Buttons-Text Fields-Text Areas-Password-Submit and Reset buttons-Drop down list-sample forms.

**UNIT-IV**

Introduction: what is ASP?-ASP Model-The Process of Serving an Active Server Page-Using Scripting Languages-Understanding Objects-Application Object-Request Object-Response Object-Server Object-Session Object.

**UNIT-V**

Working with HTML forms: Retrieving Form Data-Using Textboxes and Text Areas-Using Radio Buttons and Check boxes-Using Selected Lists-Validating Form Data.

**TEXT BOOKS:**

1. World Wide Web with HTML, Dr.C.Xavier., Tata McGraw – Hill Publishing Company.
2. Practical Asp, Ivan Bayross, BBP Publications