SYLLABUS

MBA (CM)

3rd SEMESTER

To produce world-class professionals who have excellent analytical skills, communication skills, team building spirit and ability to work in cross cultural environment.

To produce international quality IT professionals, who can independently design, develop and implement computer applications.

Professionals who dedicate themselves to mankind, who are environment conscious, follow social norms and ethics.

School of Computer Science & IT,

Devi Ahilya Vishwa Vidyalaya, Indore

www.scs.dauniv.ac.in

Course Name: **MBA (CM) 3rd Semester**

Subject Code: **CS-5416**

Subject Name: **IT Infrastructure Management**

Aim of the Subject

The aim of this course is to provide students with an understanding at how to develop skill for infrastructure management.

Learning Outcomes

The students are expected to learn following after completion of the course:

- To describe the business value and processes of IT services in an organization and apply that knowledge and skill with the initiative to a workplace scenario;
- To assess how new and present IT Infrastructure services affect an organization.
- To describe how effective IT Infrastructure Management requires strategic planning with alignment from both the IT and business perspectives in an organization.
- To synthesize the theoretical, technical, and management issues that deliver IT services to an organization.
- To explain Cyber Ethics, Intellectual Property, Privacy and Law, Computer Forensics, Ethics and Internet, and Cyber Crimes

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Unit 1

IT Infrastructure: Overview

Definitions, Infrastructure management activities, Evolution of Systems since 1960s (Mainframes-to-Mid-range-to-PCs-to-Client-server computing-to-New age systems) and their Management, growth of internet, current business demands and IT systems issues, complexity of today's computing environment, Total cost of complexity issues, Value of Systems management for business.

Unit 2

IT Infrastructure Management

Factors to consider in designing IT organizations and IT infrastructure, Determining customer's Requirements, Identifying System Components to manage, Exist Processes, Data, applications, Tools and their integration, Patterns for IT systems management, Introduction to the design process for information systems, Models, Information Technology Infrastructure Library (ITIL).

Unit 3

Current computing environments

Complexity of current computing, multiple technologies, multiple vendors, multiple users, e-Waste disposal, Total cost of ownership.

Unit 4

IT system Management

Common tasks in IT system management, approaches for organization Management, Models in IT system design, IT management systems context diagram, patterns for IT system Management

Establishing business value of information system

Information system costs and benefits, Capital budgeting for information system, Real Options pricing models, Limitation of financial models.

Unit 5

Service Delivery Processes-I, Service Delivery Processes–II, Service Support Management–I, Service Support Management–II, Storage Management–I, Storage Management–II, Security Management–I, Security Management-II

IT Ethics

Introduction to Cyber Ethics, Intellectual Property, Privacy and Law, Computer Forensics, Ethics and Internet, Cyber Crimes

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Text Book(s)

No a particular book, use reference materials

Reference Material(s)

1. Inside the PC, Sixth Edition, Prentice Hall Computer Publications, author Peter Norton.

2. Data Communication and Networking, 2nd Edition, Tata McGraw-Hill ,

author Behrouz A, Forouzan

3. Microsoft Windows Server 2008: The Complete Reference. TataMc

Course Name: **MBA (CM) 3rd Semester**

Subject Code: **CS-6518**

Subject Name: **Cloud Computing**

Aim of the Subject

To learn the main concepts, functions, key technologies, strengths, and limitations, current trends and practical's of cloud computing and the possible applications for state-of-the-art cloud computing.

Learning Outcomes

The students are expected to learn following after completion of the course:

- Learn the main concepts, key technologies, strengths, and limitations of cloud computing and the possible applications for state-of-the-art cloud computing
- Identify the architecture and infrastructure of cloud computing, including SaaS, PaaS, IaaS,
- public cloud, private cloud, hybrid cloud, etc.
- Learn Hands-on exercises on AWS, Salesforce and Google Cloud.
- Understanding of appropriate cloud computing solutions and recommendations according
- to the applications.
- Learn the core issues and latest trends and technologies of cloud computing.

Unit 1

Cloud Computing definition, Types of cloud, Evolution of Cloud Computing , Applications cloud computing, Cluster Computing, Major Players in Cloud Computing, Issues and challenges in Cloud, Cloud stakeholders, SLAs, Economics of the Cloud

Cloud Models: Public Cloud, Private Cloud, Hybrid Cloud, Community Cloud. Advantages, disadvantages and applications of the deployment models.

Unit 2

Basics of Virtualization, Types of Virtualization, Virtualization using virtualbox, Virtualization Tools and Mechanisms , Creating virtual machines in AWS, Virtualization for Data-center Automation

Scalability, Load balancing, Server Management, Fault Tolerance, Cloud Watch

Unit 3

Types of Cloud services: Infrastructure as a Service: Compute Services -Virtual machines, clusters, HPC, Data Storage services and its categories- File storage, Block storage, Object storage, applications utilizing cloud storage. Network Services

Platform as a Service, Software as a Service: Applications, working, advantages and disadvantages.

Unit 4

Database as a Service, Functions as a service-Serverless Computing, Introduction to MapReduce, HDFS, Hadoop Framework. DevOps, Containers, Kubernetes.

Unit 5

Fog Computing, Edge Computing, Green Cloud

Practical's and Case Studies:

Hypervisors – Xen, KVM , VMWare, Virtual Box, Hyper-V.

Cloud Service Providers- AWS, Microsoft Azure, Heroku, Github, Google Workspace, Salesforce

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Text Book(s)

1. Buyya, Rajkumar, Christian Vecchiola, and S. Thamarai Selvi. Mastering cloud computing: foundations and applications programming. Newnes, 2013.

2. Kai Hwang, Geoffrey C. Fox and Jack J. Dongarra, "Distributed and cloud computing from Parallel Processing to the Internet of Things", Morgan Kaufmann, Elsevier – 2012

Reference Material(s)

• Cloud Computing "A Practical Approach" Anthony T. Velte, Toby J. Velte, Robert Elsenpeter. McGraw-Hill.

• Kai Hwang, Geoffrey C Fox, Jack G Dongarra, "Distributed and Cloud Computing, From Parallel Processing to the Internet of Things", Morgan Kaufmann

Course Name: **MBA (CM) 3rd Semester**

Subject Code: **CS-5620**

Subject Name: **Web Technology and E-Commerce**

Aim of the Subject

This course focuses on principles of e-commerce from a business perspective, providing an overview of business and technology topics, business models, virtual value chains and social innovation and marketing strategies.

Learning Outcomes

The students are expected to learn following after completion of the course:

- Describe the importance of IT enabled services and challenges Identify
- strategic IT planning for so□ware development.
- Recognize enterprise IT architecture for Information technology. Illustrate
- various IT web services for betterment of knowledge.
- Design a basic web site using HTML5 and CSS3 to demonstrate responsive
- web design.
- Implement dynamic web pages with validation using JavaScript objects by applying different event handling mechanism.
- Develop simple web application using server side PHP programming and Database Connectivity using MySQL.

Unit 1

HTML & Forms: Introduction To HTML, WWW, W3C, web publishing, Common HTML, Tags

Physical & Logical, Some basic tags like changing background color of page, text color etc., Text

formatting tags, Ordered & Unordered Lists Tags, Inserting image, Links: text, image links, image

mapping , Tables , Frames, Form: Introduction with text box, text area, buttons, List box, radio,

checkbox etc.

Unit 2

Internet Basics 1 Overview of Internet, history, web system architecture, Uniform Resource Locator,

HTTP protocol basics, HTTP request & response, CSS: Introduction To Style sheet, types of style

sheets- Inline, External, Embedded CSS, text formatting properties, CSS Border, margin properties,

Positioning Use of classes in CSS, color properties, use of .

Unit 3

JavaScript: Introduction to script, types, Introduction of JavaScript, JavaScript identifiers, operators,

control & Looping structure, Intro of Array, Array with methods, Math, String, Date Objects with

methods User defined & Predefined functions, AJAX introduction, implementation, applications.

Unit 4

Server configuration, JSP Basics: JSP lifecycle, Directives, scripting elements, standard actions,

implicit objects. Concept of session, Starting session, Modifying session variables, Concept of

cookies, Handling of cookies, GET and POST methods, database connectivity

Unit 5

Introduction to E-Commerce, The Anatomy of E-Commerce Applications, E Commerce Framework,

E-Commerce Consumer Applications, E-Commerce organization Applications, Advantageous and

disadvantageous of E-Commerce, Electronic Payment Systems: Types of Electronic payment

Systems, Digital Token-Based Electronic Payment Systems, Smart Cards, Credit Card Based

Electronic Payment Systems, EDI Application in Business, Security and Privacy Issues in EDI,

Ethical, Social and Political issues in E-Commerce.

Text Book(s)

1. K. Mukhar, “Beginning Java EE 5: From Novice to Professional”, Wrox Press.

2. 1. Schafer, Steven M. Web standards programmer's reference: HTML, CSS, JavaScript, Perl, Python, and PHP. John Wiley & Sons, 2007.

3. 2.Batross, Ivan. Web Enabled Commercial Application Development Using HTML, DHTML, Javascript, Peril CGI. Bpb Publications, 2009.

4. Ravi Kalakota and Andrew B. Whinston, Frontiers of Electronic Commerce, First Edition, 2000.

Reference Material(s)

1. M. Hall, L. Brown, “Core Servlets and Java Server Pages”, 2nd edition, Pearson Education

2. Sebesta, Robert W. Programming the world wide web. Pearson Addison Wesley, 2008.

3. Glass, Michael K., et al. Beginning PHP, Apache, MySQL Web Development

Course Name: **MBA (CM) 3rd Semester**

Subject Code: **CS-4411**

Subject Name: **Introduction to Enterprise Resource Planning**

Aim of the Subject

The aim of this course is to acquire basic understanding of business processes, their integration through IT enabled applications and to develop a managerial perspective to leverage them for competitive advantage.

Learning Outcomes

The students are expected to learn following after completion of the course:

- Students will learn about business process, evolution of Enterprise applications, basics of ERP package applications.
- Students will learn concepts of enterprise architecture planning, procedure of vendor selection, methods of ERP implementation.
- Student will learn the features, advantages and functions of Sales & Distribution and CRM modules.
- Student will learn the features, benefits and functions Financial Accounting and Production Planning modules.
- Student will learn the features, benefits and functions of Human Resource, advanced planning systems and Supply Chain applications.

Unit 1

Process view of organization: Introduction to business process, problems of functional division, ERP-introduction. Evolution of Enterprise applications, Technology as process enabler, Mapping an existing process, Process redesign, new process validation.

Unit 2

Introduction to Enterprise Resource Planning: Reasons for the growth of the ERP market, ERP packages role. Enterprise application implementation projects: Rationale for ERP, Enterprise architecture planning, Selection of an ERP vendor, Contracts with vendors, consultants and employees, ERP project management and monitoring, Pitfalls of ERP packages, ERP implementation life cycle, Implementation methodology, organizing the implementation.

Unit 3

Overview of ERP modules and ERP market place: SAP AG, PeopleSoft, Baan company, JD Edwards's world solutions company, Oracle Corporation, ERP and related technologies. Sales and marketing processes, management control processes in sales and marketing, sales and

marketing modules in ERP systems, ERP and CRM, integration of sales and distribution with other modules, ERP case studies.

Unit 4

ERP accounting and finance module: Accounting and finance processes, management control processes in accounting, cash management processes, capital budgeting processes. Role of management accounting, managing large-scale ERP projects, project related factors, user training, management reporting needs, ERP accounting and finance case studies. ERP production planning and materials management: Production planning and manufacturing processes, management control processes in production and manufacturing, materials management module in ERP systems.

Unit 5

Human resource management processes, human resource information systems, integration of human resource module with other modules, human resource/production planning/materials management case. Supply chain and CRM applications: Overview of supply and demand chain, supply chain framework, advanced planning systems, introduction to CRM applications, growth of CRM applications, ERP and related technologies, detailed study of any one ERP package with emphasis on - application basics, cross-sectional analysis of the other ERP systems with the application, package architecture, and understanding of the application with the business process reference model.

Text Book(s)

1. Enterprise Resource Planning by Mary Sumner, Fifth Edition, Pearson Education.

Reference Material(s)

1. Enterprise Resource Planning –Alexis Leon -Tata McGraw Hill publication.

2. Concepts in Enterprise Resource Planning–Brady, Monk and Wagner – Thomson learning.

3. CRM at the speed of Light .- Greenberg , Paul – TMH.

Course Name: **MBA (CM) 3rd Semester**

Subject Code: **CS-4211**

Subject Name: **Object Oriented Programming using JAVA**

Aim of the Subject

To give students a good understanding of basic concepts of object oriented programdesign using JAVA. To teach and enable students to develop object oriented programming skills within theJava language; To enable students to develop object oriented Java program solutions to small applicationproblems.

Learning Outcomes

The students are expected to learn following after completion of the course:

- Understand basic principles of object-oriented program design using Java.
- Understand the basic and some advanced issues related to writing classes and methods
- such as data, visibility, scope, method parameters, object references, and nested classes.
- Understand the basic ideas behind class hierarchies, polymorphism, and programming to
- interfaces.
- Get exposure to exceptions and basic I/O streams.
- Develop solid Java programming skills and the ability to put in practice the acquired
- knowledge and understanding of the Java language and object-oriented design in relatively simple
- case studies

Unit 1

Features of java: Object-Oriented programming overview: Introduction of javaTechnology, Installing java, java program development, java source file, compilation, execution.

Data Types, Variables, Memory concepts, Naming conventions, primitive data type,declarations, variable name, numeric, literals, character literals, String, string literals, printing toconsole and taking input through console (scanner class).

Expressions: Assignment operator arithmetic operators, relational operators, logical operators,increment and decrement operators, conditional operator, operator precedence.

Unit 2

Statements: conditional: if, else if, switch statement. Break and Continue, type conversionand casting, command-line arguments.

Introduction to class, Objects, Methods and Instance Variable, primitive type vs reference typeInitializing objects with constructors, access modifiers, and encapsulation. Final instancevariable, this reference, garbage collection and finalize method, overloading methods.

Unit 3

Array declaring and creating array, passing array to methods, multidimensional array,Variable length array. Static method, static field and Math Class.

String Handling: String constructors, data and member functions, character extraction, stringcomparison, string buffer etc.

Inheritance: Inheritance basics, member access and inheritance, using super keyword, creating amultilevel hierarchy.

Polymorphism: Method overriding, dynamic method dispatch, final method and classes, abstractclasses and methods The object class.

Unit 4

Package: defining a package, understanding CLASSPATH, access protection, importingpackages, creating own packages.

Interface: defining an interface, properties of interface, advantage of interface, achievingmultiple inheritance through interfaces, variables in interfaces.

Exception Handling: Introduction, Keywords (try, catch, throw, throws), finally keyword,chained exception, user defined exception.

Unit 5

Multithreading: what are threads, the java thread model, thread priorities, thread lifecycle, creating thread and executing thread.

Streams and Files: Introduction, files and streams, java stream class hierarchy. Executing filehandling.

Applets: Applet basics, applet architecture, applet life cycle method, applet HTML tag andattributes, executing applet in web browser and in the appletviewer.

Text Book(s)

1. Java 2: The Complete Reference by Herbert Schildt, Tata McGraw- Hill.

Reference Material(s)

1. Head First Java, 3rd Edition, By Kathy Sierra, Bert Bates, Trisha Gee, O'Reilly Media,Inc.

2. The Java™ Programming Language, By Ken Arnold, James Gosling, David Holmes,Addison Wesley Professional