

PG DIPLOMA IN SYSTEMS MANAGEMENT

Non-Semester

(With Effect from the Academic Year 2013-14)

ELIGIBILITY FOR ADMISSION

Candidates who apply for the degree of PG Diploma shall possess the following qualifications.

(a) AGE LIMIT:

There is no upper Age Limit.

(b) QUALIFICATION:

Any Degree

3. DURATION OF THE COURSE

The course will be conducted for one year

3.1. EXAM : There will be an examination conducted by the University at the end of the year.

3.2. Passing minimum : 50

3.3. MEDIUM OF INSTRUCTION: The Medium of instruction will be English.

Course Profile

Decision Support System
Management Information Systems
Information Technology for Management
E-Commerce Technology and Management
Database Management System
Software Development
Enterprise Resource Planning

PAPER I: DECISION SUPPORT SYSTEMS

Course Objective

The objective of this course is to bring about an understanding of the significance, structural framework and functional performance of decision support systems. It also exposes the students to the relevance of understanding user requirements and the implementation issues.

UNIT I

Decision Concept-steps-Decision Support System-Components-Characteristics-Classification & Application.

UNIT II

Models – Modeling Process – Types of Models – Optimisation – Simulation – Heuristic – Descriptive – Predictive – Model base – Modeling Languages – Model Directory – Model Base Management System – Model Execution, Integration and command processing – Model Packages.

UNIT III

Database – Sources of Data – Data Directory – Data Structure and Database - Languages – Query Facility – Data Management System – DBMS as DSS Development Tool.

UNIT IV

User Interface – Graphics – Multimedia – Visual Interactive Modeling – Natural Language Processing – Speech Recognition and understanding – Issues in user interface.

UNIT V

Development process – Software and Hardware and Data Acquisition – Model Acquisition – Dialog Development – Integration – Testing and Validation – Training and Implementation.

REFERENCES

1. Efraim turban and Jay E Aronson, Decision Support Systems and Intelligent Systems, Prentice Hall of India, 1998.
2. Janakiraman V.S. and Sarukesi. K., Decision Support Systems', Prentice Hall of India, 1999.
3. Lofti, Decision Support System and Management, McGraw Hill Inc., International Edition, New Delhi, 1996.
4. Marakas, 'Decision Support System', Prentice Hall International Paper back Edition, 1998.

PAPER II: MANAGEMENT INFORMATION SYSTEM

Objectives: Make the students to understand the interface of the Human Resources function with Operations, Marketing, and Finance functions and to impart knowledge on information systems and its relevance to business decisions.

UNIT I : Human Resource Philosophy - Changing environments of HRM - Strategic human resource management - Using HRM to attain competitive advantage - Trends in HRM - Organisation of HR departments - Line and staff functions - Role of HR Managers.

UNIT II: Employment planning and forecasting – Recruitment, selection process- Sources- Induction-Orientation & Training - Management Development - On-the-job and off-the-job- Management Developments - Performance appraisal in practice. Managing careers : Career planning and development - Managing promotions and transfers.

Unit III : Establishing Pay plans : Basics of compensation - factors determining pay rate - Statutory benefits - non-statutory (voluntary) benefits - Labour relations - Industrial relation- Discipline administration - grievances handling - managing dismissals and separation.

UNIT IV: Foundations of Information Systems: A framework for business users - Roles of Information systems - System concepts - Organisation as a system - Components of Information Systems - IS Activities - Types of IS-HRIS: Function, Usage and Application.

UNIT V: DSS: DSS models and software: The decision making process - Structured, Semi Structured and Unstructured problems; Managing Information Technology: Managing Information Resources and technologies - Security and Ethical Challenges: IS controls - facility control and procedural control

References

1. Gary Dessler, "Human Resource Management", Seventh edition, Prentice-Hall of India
2. James A O'Brien, "Management Information Systems", Tata McGraw Hill.
3. VSP Rao, Human Resource Management : Text and cases, First edition, Excel Books
4. Waman S Jawadekar , "Management Information System Text and cases", TMH

PAPER III: INFORMATION TECHNOLOGY FOR MANAGEMENT

Course Objective

This course aims at highlighting the significance of role of information technology in enhancing the managerial performance. It also exposes the students to the technical aspects and business applications of information technology.

UNIT I

Managing in Information Age - Evolution of IT Management – Types of Information Systems – Internet Based Business Systems – Value Chain Reconstruction for E-Business – IT Management Challenges and issues – Critical success Factors for IT Managers.

UNIT II

Computing Hierarchy – Input – Output Technologies – Hardware Issues – System Architecture – Operating Systems – Network Operating Systems – Grid Computing – Mobile Computing – Ubiquitous Computing – Application Programming – Managing Application Development – Data Resources – Managing Data Resources – Problem of Change and Recovery.

UNIT III

Communication Technology – WWW – Intranets – Extranets – Voice Networks Data Communication Networks – Last Mile – Wireless System – Web Hosting – Application Service Providers.

UNIT IV

IT Applications - Enterprise System – Expert System – Decision Support System – Neural Networks – Executive Information System – Customer Relationship Management System – Supply Chain Management Systems – Knowledge Management – Data Warehousing – Data Mining – Virtual Reality – Enterprise Resource Planning – E-Business and Alternatives. E-Business Expectations and Customer Satisfaction.

UNIT V

IT Strategy Statements – Planning Models for IT Managers Legislation and Industry Trends. Independent Operations – Headquarters Driver – Intellectual Synergy – Integrated Global IT – IT investment – Estimating Returns – IT Value Equation – Pricing Frame work – Hardware and Software Buying – Factors of IT Management – Implementation Control – Security – Quality - Ethical Issues

REFERENCE

1. Efraim Turban, R. Kelly Rainer Jr, Richard E. Potter, Introduction to Information Technology, John Wiley & Sons, (Asia) Pvt. Ltd. Singapore, 2004.
2. Garroll W. Frenzel Johne. Frenzel, Management of Information, Technology, Thomson Course Technology, Boston, 2004.
3. Henry C. Lucas. Jr, Information Technology – Strategic Decision Making for Managers, John Wiley & Sons (Asia) Pvt. Ltd., Singapore, 2005.

PAPER IV: E-COMMERCE TECHNOLOGY AND MANAGEMENT

Course Objective

The objective of this course is to enhance the understanding of the students about the technical and managerial aspects of E-Commerce. the scope, significance and technical aspects of database management system. The students are also exposed to the organisational requirements and legal and ethical implications of E-Commerce,.

UNIT – I

Electronic commerce and physical commerce - Economic forces – advantages – myths – business models.

UNIT – II

Internet and World Wide Web, internet protocols - FTP, intranet and extranet - cryptography, information publishing technology- basics of web server hardware and software.

UNIT – III

Consumer oriented ecommerce – e-tailing - models - Marketing on web – advertising, e-mail marketing, e-CRM; Business oriented ecommerce – E-Government, EDI on the internet –SCM - Web Auctions - Virtual communities - Web portals

UNIT – IV

E payments - Characteristics of payment of systems, protocols, E-cash, E- cheque - Micro payment systems.

UNIT – V

Legal, Ethics and privacy issues in E-Commerce – Protection needs and methodology – consumer protection - cyber laws - contracts and warranties . Taxation and encryption policies.

REFERENCES

1. Bharat Bhasker, Electronic Commerce – Frame work technologies and Applications, 3rd Edition. Tata McGrawHill Publications, 2008.
2. Efraim Turban et al, Electronic Commerce –A managerial perspective, Pearson Education Asia, 2006.
3. Gary P. Schneider, Electronic commerce, Thomson course technology, Fourth annual edition, 2007
4. Hentry Chan & el , E-Commerce – fundamentals and Applications, Wiley India Pvt Ltd,2007.
5. Kalakota et al, Frontiers of Electronic Commerce, Addison Wesley, 2004
6. Kamlesh K.Bajaj and Debjani Nag, Ecommerce- the cutting edge of Business, Tata McGrawHill Publications, 2008

PAPER V: DATABASE MANAGEMENT SYSTEM Course Objective

This course aims to enable students to understand the scope, significance and technical aspects of database management system. It also exposes the students to the functional implications and the corporate requirements of database management.

UNIT – I

Database and Database Management – characteristics – importance –functions - advantages – Database Management System - evolution – database architecture data organization- file structure and indexing

UNIT – II

Data models- Conceptual design- ER diagram-relationships- normalization -data management and system integration

UNIT – III

Query languages-SQL for data creation, retrieval and manipulation, database transactions, concurrency control, atomicity, recovery, security, backup and recovery, data base administration- client server architecture based RDBMS.

UNIT – IV

Concepts of distributed databases and design, Object oriented databases-object life cycle modeling conceptual design-UML.

UNIT – V

Overview of visual databases and knowledge based databases-conceptual design and business Impacts – Significance of certifications such as Oracle Certified Professional.

REFERENCES

1. Hector Garcia -Molica et al, Database Systems – The complete book, Pearson Education, 2008
2. Jain V. K., Database Management Systems, Dreamtech press, 2007
3. Jeffrey A Hoffer et al, Modern Database Management, 8th Edition, Pearson Education,2008,
4. Mark L.Gillenson & el, Introduction database management, Wiley India Pvt. Ltd, 2008
5. Narayan S. Umanath and Richard W. Scamell, Data Modeling and database design, Thomson course technology, 2008
6. Peter Rob and Carlos Coronel, Database systems- Design, Implementation and Management, Thomson Course technology, 2008
7. Peter Rob, Carlos Coronel, Database System and Design, Implementation and Management, 7 th edition, Cengage Learning,

PAPER VI: SOFTWARE DEVELOPMENT

Course Objective

This course aims to enable students to understand the technical process and managerial significance of software development. It also exposes the students to the functional implications and the human factors associated with developing and maintaining software.

UNIT I

Overview of software development life cycles –Challenges – Software engineering Process - paradigms – Comparison between Process and Product –Metrics – Software project management – Planning – estimation – Risk analysis – Software project scheduling

UNIT II

Requirement Analysis – Definition – Specification - tools – Formal Specification – Prototyping
Specification – Analysis modelling

UNIT III

Software design – Abstraction – Modularity – Software Architecture – Effective modular design
- Cohesion and Coupling – Architectural design – Procedural design – Data flow oriented design
– Object Oriented design

UNIT IV

User interface design – Human factors – Human computer interaction – Interface standards -
Fundamentals of coding – code documentation – code efficiency – Software Configuration
Management

UNIT V

Software Quality Assurance – Review, Walkthrough and inspection- Quality metrics – Software
Reliability – testing – Path testing – Control Structures testing – Black Box testing – Integration,
Validation and system testing – Reliability models for Software quality - Software Maintenance

REFERENCES

1. Ali Behforooz and Frederick J. Hudson, ‘Software Engineering Fundamentals, Oxford publications.
2. Carlo Ghezzi, Mehdi Jazayari, Dino Mandrioli, ‘Fundamentals of Software Engineering, Prentice Hall of India, 1991.
3. Pfleeger, ‘Software Engineering’, Prentice Hall, 1999.
4. Richard Fairley, ‘Software Engineering’, II Edition, Tata McGraw Hill, New Delhi.
5. Roger Pressman. S., ‘Software Engineering’, A Practitioner’s Approach, Tata McGraw Hill, New Delhi.
6. Sommerville I. , ‘Software Engineering, V Edition, Adison Wesley, 1996.

PAPER VII: ENTERPRISE RESOURCE PLANNING

Course Objective

This course aims to enhance the understanding of the students with respect to the conceptual framework and the technological infrastructure of Enterprise Resource Planning. It also aims to expose the students to the implementation issues and future trends associated with ERP.

UNIT – I

Overview of enterprise systems – Evolution - Risks and benefits - Fundamental technology -
Issues to be consider in planning design and implementation of cross functional integrated ERP
systems.

UNIT – II

Overview of ERP software solutions- Small medium and large enterprise vendor solutions – Business Process Reengineering - Business Engineering and best Business practices - Business process Management- Overview of modules -sales and Marketing, Accounting and Finance, Materials and Production management

UNIT – III

Planning Evaluation and selection of ERP systems-Implementation life cycle - ERP Implementation - Methodology and Frame work- Training – Data Migration - People and Organization in implementation-Consultants, Vendors and Employees.

UNIT – IV

Maintenance of ERP- Organizational and Industrial impact - Success and Failure factors of ERP Implementation -case studies.

UNIT – V

Extended ERP systems – Customer Relationship Management – Supply Chain Management - Business Analytics - Future trends in ERP systems-web enabled Wireless technologies

REFERENCES

1. Alexis Leon, Enterprise Resource Planning, second edition, Tata McGraw-Hill, 2008.
2. Alexis Leon, ERP demystified, second Edition Tata McGraw-Hill, 2006.
3. Jagan Nathan Vaman, ERP in Practice, Tata McGraw-Hill, 2008
4. Mahadeo Jaiswal and Ganesh Vanapalli, ERP Macmillan India, 2006.
5. Summer, Enterprise Resource Planning, Pearson Education, 2008.
6. Vinod Kumar Grag and N.K. Venkitakrishnan, ERP- Concepts and Practice, Prentice Hall of India, 2006.