

**SCHEME OF EXAMINATION**

**&**

**SYLLABI**

**of**

**Master of Business Administration  
(Software Enterprise Management)**

**for**

**Academic Session 2007-08**

## **MBA (Software Enterprise Management)**

### **Criteria for Internal Assessment**

The internal assessment of the students (out of 40 marks) shall be as per the criteria given below:

- 1. Class Test-I** **- 15 marks**  
(Individual Term Paper/Written Assignment/Project)
- 2. Class Test-II** **- 15 marks**  
(Will be a written test to be conducted on the date communicated by the University)
- 3. Individual Presentation/Viva-Voce/Group Discussion** **- 10 marks**

**Scheme of Examination  
MBA (Software Enterprise Management)**

<b>First Semester</b>			
<b>Code No.</b>	<b>Paper</b>	<b>L/P</b>	<b>Cr.</b>
SE 101	Management Functions & Organizational Behaviour	3	3
SE 103	Business Communication	3	3
SE 105	Financial and Management Accounting	4	4
SE 107	Quantitative Methods for Decision Making	3	3
SE 109	Managerial Economics	3	3
SE 111	Marketing Management	3	3
SE 113	Java Programming	4	4
<b><u>Practical</u></b>			
SE 151	Java Programming Lab	6	3
	<b>Total</b>		<b>26</b>

**Scheme of Examination**  
**MBA (Software Enterprise Management)**

<b>Second Semester</b>			
<b>Code No.</b>	<b>Paper</b>	<b>L/P</b>	<b>Cr/</b>
SE 102	Business Research	3	3
SE 104	Human Resource Management	3	3
SE 106	Financial Management	4	4
SE 108	Business Environment	3	3
SE 110	Operations Management	3	3
SE 112	System Analysis and Design	4	4
SE 114	Database Management Systems	4	4
<b><u>Practical</u></b>			
SE 152	DBMS Lab	6	3
	<b>Total</b>		<b>27</b>

**Scheme of Examination**  
**MBA (Software Enterprise Management)**

<b>Third Semester</b>			
<b>Code No.</b>	<b>Paper</b>	<b>L/P</b>	<b>Cr.</b>
SE 201	Financial Services Management	4	4
SE 203	Enterprise Resource Planning and Business Application Programming	4	4
SE 205	Software Project Management	4	4
Elective-I (Select any one group)			
<b>Group 1</b>	<b>Human Resource</b>		
SE 207	Human Resource Planning and Development	4	4
SE 209	Human Resource Payroll	4	4
<b>Group 2</b>	<b>Production and Operations Management</b>		
SE 211	Materials Management	4	4
SE 213	Production Planning and Control	4	4
<b>Group 3</b>	<b>Marketing</b>		
SE 215	Sales and Distribution	4	4
SE 217	Customer Relationship Management	4	4
<b>Group 4</b>	<b>Technical/Administration</b>		
SE 219	Database Administration	4	4
SE 221	Operating Systems	4	4
<b><u>Practical</u></b>			
SE 251	Business Application Programming Lab	6	3
SE 253	Summer Training Project	-	2
SE 255	Minor Project Work		2
	<b>Total</b>		<b>27</b>

**Scheme of Examination  
MBA (Software Enterprise Management)**

<b>Fourth Semester</b>			
<b>Code No.</b>	<b>Paper</b>	<b>L/P</b>	<b>Cr/</b>
SE 202	Corporate Strategy & Policy	3	3
SE 204	Financial Accounting (ERP)	4	4
<b>*Elective – II (Choose any one paper)</b>			
SE 206	Human Resource Management	4	4
SE 208	Sales and Distribution	4	4
SE 210	Materials Management	4	4
SE 212	Production Planning	4	4
SE 214	System Administration	4	4
<b>Practical</b>			
SE 252	Financial Accounting (ERP) Lab	4	2
SE 254	Elective Lab	4	2
SE 256	Dissertation	-	8
SE 258	<b>Seminar and Project Progress Report</b>		<b>2</b>
SE 260	<b>Comprehensive viva voce</b>		<b>1</b>
	<b>Total</b>		<b>26</b>

\*The student will pursue the same elective area, which was opted in the third semester

**Note:**

1. Total Credits = 106
2. To obtain the degree a student shall require 100 credits

## **Admission Process**

Admission to the MBA (Software Enterprise Management) Programme will be made on the basis of the Common Entrance Test. Students fulfilling the following eligibility criteria shall be eligible to appear in the Common Entrance Test.

## **Eligibility Criteria**

- B.E./ B. Tech with minimum of 60% marks,
- M. Sc. (CS), M. Sc. (IT), M. Sc. (Electronics) with minimum of 60% marks,
- MCA with minimum of 60% marks.

# Management Functions & Organizational Behaviour

Code No. SE 101

L-3

T-0

Credits: 3

## Objectives:

This course is to acquaint the students with the basic nature of management, its process, tasks and responsibilities of a professional manager as well as organizational behavioral dynamics governing an organization.

## Course Contents:

**Introduction:** Meaning and nature of management; Management systems and processes; Tasks and responsibilities of a professional manager; Managerial skills.

**Decision Making:** Organizational context of decisions; Decision making models; Problem solving and decision making techniques and processes, Management by objectives.

**Organization Structure and Processes:** Organizational climate, culture and managerial ethos; Organizational structure and design; Centralization and decentralization; Delegation and inter-department coordination; Managerial communication; Planning process; Controlling.

**Behavioral Dynamics:** Individual determinants of organization behavior: perceptions, learning, personality, attitudes and values, motivation; Job anxiety and stress.

**Interactive Aspects of Organizational Behavior:** Analyzing inter-personal relations; Group dynamics; Management of organizational conflicts; Management of change; Leadership styles and influence process.

## SUGGESTED READINGS:

- 1 Koontz, H. and Wehrich , H., *Management-A Global Perspective*, 12., TMH
- 2 Pareek, U., *Organizational Processes*, Oxford and IBH, New Delhi.
- 3 Robbins, S. P., *Management*, 8<sup>th</sup> ed., New Jersey, Englewood Cliffs, Prentice Hall Inc.
- 4 Robbins, S. P., *Organizational Behavior*, 9<sup>th</sup> ed., Prentice Hall of India.
- 5 Robbins S.P, Seema Sanghi, *Organizational Behavior*, 11<sup>th</sup> ed, Pearson Education.
- 6 Stoner, et. al., *Management*, 6<sup>th</sup> ed., Prentice Hall of India.
- 7 Tayal, G. L., *Management*, Sultan Chand and Sons, New Delhi.
- 8 Paul Hersey, Kenneth H.Blanchard, *Management of Organisational behavior*, 8<sup>th</sup> ed., Pearson Edu.

## **Business Communication**

Code No. SE 103

L-3

T-0

Credits: 03

### **Objectives:**

To equip the students with the necessary concepts & techniques and skills of communications to inform others, inspire them and enlist their activity and willing cooperation in the performance of their jobs.

### **Course Contents:**

**Introduction;** Importance, Nature and Role of Business Communication

**Perceptions and Realities:** Different Forms of Communication and their importance including body language Communication; with colleagues including Brain Storming Facing Interviews; Group Discussions

**Verbal Communication** with colleagues and clients & telephonic conversation

**Written Communication:** Individual communication-Letters and Memos Group Communication-Circulars & Notifications; Report Writing and Presentation; Writing Curriculum Vitae; Mass Communications-New Letters, Publicity Handouts, Instructions and Manuals ;Electronic Communication-Fax, e-mail, Internet and Multimedia

### **Non Verbal Communication:**

**Oral Communication:** Legal Communication, Proposals, Agreements, MOU's & Negotiations; Public Speaking; Handling the Press; Business Etiquette

### **Suggested Readings :**

- 1 Meenakshi Raman, Prakash Singh, Business Communication, Oxford University Press.
- 2 Scot Ober, contemporary Business Communication; 5<sup>th</sup> ed., wiley.
- 3 Locker, Kitty Kaxzcmarek, Stephen, Business Communication; McGraw Hill.
- 4 K.K.Ramchandran; Lakshimi.K.K.,K.K.Karthik, Business Communication; MacMillan.
- 5 Francis Soundararaj, Speaking & Writing for effective Business Communication; MacMillan
- 6 Lesikar, R.V. and pettit, J.D., Business communication; Theory and Application; 16<sup>th</sup> ed., AITBS.
- 7 Murphy, H.A., Hildebrandt, H.W. and Thomas, J.P.; Effective Business Communication; 7<sup>th</sup> Edition, Mc. Graw Hill, New York.
- 8 Fisher, D.; Communication in Organizations; 2<sup>nd</sup> Edition, Jaico Publishing House, Delhi.
- 9 Krishna Mohan, Effective English Communication, TMH.

## Financial and Management Accounting

Code No. SE 105

L-4

T-0

Credits:04

### Objectives:

The basic purpose of this course is to develop an insight of postulates, principles and techniques of accounting and utilization of financial and managerial accounting information for planning, decision-making and control.

### Course Contents:

**Nature of Accounting Information:** Accounting Concepts and Conventions, **Accounting Standards,**

**Understanding/Preparation of Financial Statements:** Trial Balance, Profit and Loss account, Balance Sheet, **Financial Reporting in India.**

**Financial Statement Analysis - Comparative Statements, Common Size Statement, Trend percentage analysis,** Accounting Ratio Analysis, Fund Flow analysis, Cash Flow analysis

**Management Accounting:** Costing- Utility of costing elements, Cost Sheet Problems, **Inflation Accounting, Human Resource Accounting, Depreciation Methods and Accounting.** Budgeting- Budgets and Budgetary control, Principles and Methods, Preparation/Types of Budgets, Flexible Budget, Cash Budget, Master Budget, Zero Based Budgeting, Problems. Cost-Volume Profit Analysis and Cost Control- Marginal costing, Cost-Volume Profit Analysis, Break Even Analysis, Applications and Limitations, Problems, Standard Costing,

### Suggested Readings:

- 1 M Y Khan and P K Jain, "Management Accounting" -Second Edition Tata McGraw Hill Publishing Co. Ltd., New Delhi
- 2 S N Maheswari, "Financial Management", Sixth edition, Tata McGraw Hill Publishing Co. Ltd., New Delhi
- 3 Rajesh Kothari; Abhishek Godha, Management accounting, Concepts & Applications; Macmillan.
- 4 N Dhameja and K.S Sastry, "Finance and Accounting for Managerial competitiveness", Wheeler Publishing, Allahabad
- 5 Agarwal, J.D., "Accounting for Financial Analysis, IIF Publication, Delhi.
- 6 Horngren, "Cost Accounting: A Managerial Emphasis", 11<sup>th</sup> ed, Prentice Hall of India Delhi.
- 7 ICAI " Accounting Standards".

## Quantitative Methods for Decision Making

Code No. SE 107

L-3

T-0

Credits: 03

### Objectives:

To illustrate and exemplify various quantitative skills for decision making.

### Course Contents:

**Descriptive Statistics:** - Presentation of data, Measures of Central tendency, Probability (Concept, Theorems, Conditional Probability, Bayes' Theorem), Probability Distribution (Discrete and Continuous), Correlation and Regression

**Linear Programming:** Graphical Solution and Simplex Method, Duality

**Transportation Problems** (Initial Basic Feasible Solution, Test for Optimality and Transshipment), Assignment Problem

**Decision Theory** (Decision Under certainty, risk and Uncertainty, Marginal Analysis, Decision tree Analysis) , Game Theory (Pure and Mixed Strategy, Graphical, Dominance and Algebraic Method), Introduction to Statistical, Optimization and related Software

### Suggested Readings

1. Hillier, F. S. & Hillier, M. S. Introduction to Management Science. Tata McGraw Hill.
2. Gupta S.P & Gupta, M.P Statistical Methods. Sultan Chand & Sons, New Delhi.
3. Taha, H. A., 7<sup>th</sup> ed. Operation Research: An introduction. Pearson Education New Delhi
4. Vohra, N.D, Quantitative Techniques in Management. Tata McGraw Hill, New Delhi

## Managerial Economics

Code No. SE 109

L-3

T-0

Credits:03

### Objective:

The objective of this course is to acquaint the participants with concept and techniques used in Micro-Economics Theory and to enable them to apply this knowledge in business decision-making.

### Course contents:

**Concept and Techniques:** Nature of business decision-making, marginal analysis, optimization

**Demand Analysis:** Theory of Demand-Demand Functions, Income and Substitution Effects, Revealed Preference Approach and Demand Forecasts; Production and cost - returns to scale, Cost Curves,

**Theory of Firm:-** Profit Maximization, Sales maximization, Theory of Distribution Organizational slack, Ownership and Control;

**Market Structure** - Competition, Monopoly, Oligopoly, Non-price Competition,

**Capital Budgeting** - Investment Criteria, Indivisibility and Interdependence of Projects, Capital Rationing

### Suggested Readings:

1. Peterson, II, C. and Lewis, C.and Lewis, C.C; Managerial Economics, Prentic Hall of India, New Delhi.
2. Duncan W. R. and Crook, J.N.; Managerial Economics, Heritage Publishers, New Delhi.
3. Joel, D; Managerial Economics, Prentic Hall of India, New Delhi.
4. Mote, V.L., Paul, S. and Gupta, G. S.; Managerial Economics, Tata McGraw Hill, New Delhi
5. Sankaran S., Micro Economics, Margham Publications..
6. David Melmelstein, "Economics Mainstream Readings and Redical Critiques" Ed. Random House, New York.

# Marketing Management

Code No. SE 111

L-3

T-0

Credits: 03

## Objective:

The course aims at making students understand concepts, philosophies, processes and techniques of managing the marketing operations of a firm.

## Course Contents:

**Introduction to Marketing :** Meaning, Nature and Scope of Marketing; Marketing Philosophies; Marketing Management Process; Concept of Marketing Mix; Market Analysis: Understanding Marketing Environment; Consumer and Organisation Buyer Behaviour; Market, Measurement; Market Segmentation, Targeting and Positioning.

**Product Planning and Pricing:** Product Concept; Types of Products; Major Product Decisions; Brand Management; Product Life Cycle, New Product Development Process; Pricing Decisions; Determinants of Price; Pricing Process, Policies and Strategies.

**Promotion and Distribution decisions:** Communication Process; Promotion Tools Advertising, Personal Selling, Publicity and Sales Promotion; Distribution Channel Decisions-Types and Functions of Intermediaries, Selection and Management of Intermediaries.

**Marketing Organization and Control:** Emerging Trends and Issues in Marketing Consumerism, Rural Marketing, Social Marketing; Direct and Online Marketing; Green Marketing.

**Introduction to Service Marketing :** Introduction to Services, Difference between services and tangible and non-tangible products, Conceptual Framework of Service marketing

## Suggested Readings

- 1 Philip Kotler, Marketing Management: Analysis, Planning, Implementation & Control, Prentice Hall of India.
- 2 Michael, J. E., Bruce, J. W. and William, J. S., 13th Edition, Marketing Management, Tata McGrawHill, New Delhi.
- 3 Louis E. Boone and David L. Kurtz ,Contemporary Marketing. Harcourt Collye Publishers.
- 4 Douglas, J. Darymple & Leonard J. Parsons, Marketing Management: Text and Cases. Seventh Edition, John Wiley and Sons.
- 5 Pride, William, M., and O.C. Ferrell, Marketing: Concepts and Strategies. Biztantra, New Delhi.
- 6 Kotler and Armstrong, Principles of Marketing Management. PHI.
- 7 Adrian Palmer, Introduction to Marketing Theory and Practice, Oxford.

8 V S Ramaswamy,S Namakumari, Marketing Management Planning, Implementation and Control, 3<sup>rd</sup> Edition, Macmillan India Ltd.

## **Java Programming**

Code No. SE 113

L-4

T-0

Credits: 04

### **Objective:**

The course is designed to impart knowledge and skills required to solve the real world problems using object-oriented approach utilizing Java language constructs. This course covers the subject in two parts, viz, Java Language and Architecture Frame Work of the various operating systems.

### **Course Contents:**

Introduction to Java: Importance and features of Java, constants, variables and Data Types, Operators and Expressions, Decision Making, Branching and Looping: if..else, switch,?: operator, while, do, for statements. Introducing classes, objects and methods: defining a class, adding variables and methods, creating objects, constructors, Access protection.

Arrays and String: Creating an array, one and two dimensional arrays. Classes: String and String Buffer classes, Wrapper classes: Basics types, using super, class inheritance. Multilevel hierarchy abstract and final classes, Vectors , Packages and interfaces.

Working with windows, Graphics and Text,using AWT controls, Layout managers and menus, handling Image and Java Applet

Exception Handling: Fundamentals exception types, uncaught exceptions, throw, throw, Final , Multithreaded Programming: Fundamentals, Java thread model: priorities, synchronization, messaging, thread classes, Runnable interface, inter thread Communication.

Input/Output Programming: Basics, Streams, Byte and Character Stream, predefined streams, Reading and writing from console and files. Networking: Basics, networking classes and interfaces, using java.net package, doing TCP/IP and Data-gram Programming

**Architectures and frameworks:** Windows architecture, Linux Architecture , J2EE Architecture (with Database Connectivity).net framework

### **Suggested Readings**

1. H. Schildt, “The Complete Reference – Java2”, Fourth Edition, Tata McGraw Hill
2. Dietel and Dietel, “Java: How to Program Java 2”, Second Edition, Pearson Education.

## **Java Programming Lab**

Code No. SE 151

L-6

T-0

Credits : 03

The Lab will be based on the course Java Programming. Students are expected to achieve a level of competence in Java based Technologies under 2-Tier/3-Tier Client Server environment by implementing their lab assignments and by developing small to medium application which is to be submitted through seminars/progress reports.

## Business Research

Code No. SE 102

L-3

T-0

Credits:03

### Objectives:

The course aims at equipping students with an understanding of the research process, tools and techniques in order to facilitate managerial decision-making.

### Course Contents:

**Introduction to Business Research:** Definition; Nature and Scope of Business Research; The Research Process; Problem Identification and Definition; Determination of Information Needs; Hypothesis Formulation; Developing Research Proposal; Ethical issues in Research.

**Research Design and Data Collection:** Types of Research Design; Secondary and Primary Data; Primary Data Collection Instruments – Questionnaire Designing and Testing; Schedule; Observation Methods; Qualitative Research; Scaling Techniques and Attitude Measurement; Online Data Sources and Research.

**Sample Design:** Defining the Universe and Sampling Unit; Sampling Frame; Probability and Non-probability Sampling Methods; Sample Size Determination, Data Collection and Survey Errors.

**Data Analysis, Interpretation and Report Preparation:** Data Editing and Coding; Tabulation; Hypothesis Testing; Analysis of Variance; Advanced Data Analysis Techniques- Factor Analysis, Cluster Analysis, Discriminant Analysis; Conjoint Analysis; Multi Dimensional Scaling; Report Preparation and Presentation.

### Suggested Readings

- 1 Donald, R. Cooper and Parmela, S. Schindler. Business Research Methods. Tata McGraw Hill.
- 2 Kothari C.R., Research Methodology Methods and Techniques. Wishwa Prakashan.Malhotra, Naresh K.4<sup>th</sup> Edition. Marketing Research. Pearson Education Pvt. Ltd.
- 3 Richard, I Levin. Statistics for Management. PHI, Delhi.

## Human Resource Management

Code No. SE 104

L-3

T-0

Credits: 03

### Objectives:

This course will sensitize the participants to those factors in group dynamics which contribute to work performance of individuals and teams. It also acquaint with managerial skill required to effectively manage people in an organization, in order to achieve corporate goals successfully.

### Course Contents:

**Introduction to HR** : Evolution of Human Resources Management in India, context and Complexity

**Planning:** Concepts of Human Resource Planning Process, Human Resource Information System,

**Recruitment:** Recruitment and Selection & interviewing, Training & Development; Empowerment,

**Appraisal System:** Performance Appraisal Systems (design, counseling, feedback etc.)

**Compensation and Career Planning** : Compensation Management including

Incentives, Career Succession Planning, Future issues of HRM

**Discipline and Conduct** : Management of Discipline, Participative Management, Unionized labor and bargaining process

**Research and Evaluation** : Personnel Research, Retention Strategies, Human Resource Accounting and Audit.

### Suggested Readings :

- 1 K.Aswhappa, Human Resource and Personnel Management, 4<sup>th</sup> ed., Tata McGraw Hill.
- 2 Mirza S Saiyadain, Human Resources Management, 3<sup>rd</sup> ed, Tata McGraw-Hill Publishing Company Limited.
- 3 R.Wayne Mondy,Robert M.Noel, Human Resources Management, 9<sup>th</sup> Edition, Pearson Education.
- 4 Tamika Agarwala, Strategic Human Resource management, Oxford.
- 5 Prof.A.K.Ghosh, Human Resource Management, Manas Publications.
- 6 Byers and Rue. Human Resource Management, 7 edition, Irwin.
- 7 Venkatratnan and Srivastava, Personnel Management and Human Resources, Tata McGraw Hill.
- 8 Pattanayak Biswajeet, Human Resource Management, PHI.
- 9 Decenzo/Robbins, Human Resource Management, 3 edition, PHI.
- 10 Beaumont,P.B. “ The Future of Employment Relations”. New Delhi, Sage
- 11 Holloway, J. ed. “Performance Measurement and Evaluation. New Delhi, Sage.

# Financial Management

Code No. SE 106

L-4

T-0

Credits: 04

## Objectives:

The purpose of this course to prepare managers to handle Business finances, Balance Sheet preparation and analysis, investment management & break even point analysis, Risk Analysis and Foreign Exchange Management. It also enhances the understanding of the capital market involving investors, institutions and instruments.

## Course Contents:

**Introduction:** To overview of capital market, money market and currency market in the context of Indian Environment Stock Market Dealing in Financial Instruments

**Corporate Finance:** Time Value of Money, Valuation of Securities, Cost of capital, Investment Appraisal, risk and return analysis, Capital structure decision, Long term finance, Dividend policy

**Working Capital Management:** Inventory Management, Receivables Management, Cash Management, Short Term Financing including Securitization

**Corporate Restructuring :** Basics of foreign exchange dealings Introduction to Global Financial Market Raising money abroad

**An overview of derivative instruments and derivative trading**

**Structure of Financial Institutions:** Development Financial Institutions, Commercial Banks, Insurance, Non Banking Financial companies etc. Financial Management in public sector enterprises

## Suggested Readings:

- 1 Brealey, R. A., and Stewart C Myres, Principles of Corporate Finance, Tata McGraw Hill
- 2 Pandey, I.M., Financial Management, 9<sup>th</sup> ed., Vikas Publications.
- 3 Prasanna Chandra, Financial Management Theory and Practice, 6<sup>th</sup>ed, Tata McGraw Hill Publishing Company Ltd.
- 4 Damodaran, Corporate Finance, 2<sup>nd</sup> ed., John Wiley & Sons
- 5 Archer, Stephen H. etc. "Financial Management". New York, John Wiley.
- 6 Hampton, John. "Financial Decision making, Englewood Cliffs, New Jersey, Prentice Hall Inc.

## **Business Environment**

Code No. SE 108

L-3

T-0

Credits: 03

### **Objectives:**

The purpose of this course is to acquaint students with various laws, forces and regulatory measures governing business operations in India.

### **Course Contents:**

**Elements of Indian Law and Judicial System :** Law of Contract – Formation, Vitiating Elements, Performance and Discharge of Contract; Law of Partnership and Sale of Goods Act; Negotiable Instruments Act, 1881; Company Law – Types of Companies, Incorporation of a Company, Memorandum and Articles of Association; Prominent Labour Laws and a Brief Description of Regulatory Provisions.

**Regulatory Business Laws:** Industrial and Licensing policy (Latest), Foreign Exchange Management Act, Consumer protection Act, Environment Protection Acts, Competition Law.

**New Economic Environment:** Liberalization, Privatisation and Globalisation of Indian Economy, Trends and Issues.

**Monetary and Fiscal Environment:** Securities and Exchange Board of India (SEBI) and investors' protection, Monetary and fiscal policies.

### **Suggested Readings:**

- 1 Maheshwari, S.N. and Maheshwari, S.K. A Manual of Business Law. Himalaya Publishing House, New Delhi (Latest Edition).
- 2 Bedi, Suresh. Business Environment. Excel Books, New Delhi
- 3 Tulsian, P.C. Business Law. Tata McGraw – Hill, New Delhi.
- 4 Tuteja, S.K. Law for Managers. Sultan Chand and Sons, New Delhi.
- 5 Bulchandani, K.R. (1st Edition 1999). Business Law for Management. Himalaya Publishing House, New Delhi.
- 6 Economic Survey, Govt. of India – Latest Issue.
- 7 Monthly Bulletin, Reserve Bank of India, Mumbai

# Operations Management

Code No. SE 110

L-3

T-0

Credits: 03

## Objectives:

- To understand role of Operations Management in the functioning of a service organization.
- To acquaint an insight into the relationships that exists with various factors affecting the operations of a service organization.
- To apply the tools and techniques for analyzing, designing and improving the functioning of operation systems.

## Course Contents:

**An Overview of Operations Management:** Facilities Planning; Production selection; Process selection; Facilities location; Facilities layout and materials handling; capacity planning.

**Operation Planning and Control:** Work design; Productivity and work style; Job design; Planning and control for mass production; Planning and control for batch production; Planning and control for shop production; Planning and control of purchase.

**Introduction to Materials Management:** purchase system and procedure; Inventory management; Stores Management Standardization, Codification and variety reduction; Waste management;.

**Maintenance management and Reliability;** Value Engineering; Quality assurance; Quality control; Total Quality Management and World Class Systems Management(WCSM)

**Globalization of Services;** Service Strategy and Competitiveness

**Process Technology & Information Technology;** Technology in Services; Information Systems, ERP Systems; Technology & Their Service Delivery Systems; HRM in Services.

## Suggested Readings:

1. Roberta S. Russell, Bernard W.Taylor, Operations Management, 4<sup>th</sup> edition, Person Education.
2. Norman Gaither, Production and Operations Management, The Dryden Press, Florida.
3. Nair, N.G Production and Operations management, Tata McGraw Hill Publishing Hours, new Delhi.
4. Riggs, J.L. Production Systems: Planning, Analysis and Control, John Milly & Sons, New York.
5. Cengiz Haksever, Barry Render, Roberta S. Russel, Robert G. Murdick, Service Management and Operations (2<sup>nd</sup> edition), Pearson Education.

6. James A Fitzsimmons, Mona J Fitzsimmons, New Service management: Creating Memorable Experiences, Sage Publication Inc.
7. James a Fitzsimmons, Service Management, Operations, Strategy & Information Technology, McGraw-hill College
8. Kanishka Bedi, Production and Operations Management, Oxford.
9. Norman Gaither , Greg Frazier, Operations Management, Thomson.

# System Analysis & Design

Code No. SE 112

L-4

T-0

Credits: 04

## Objectives:

The objective of the course is to provide the necessary background and experience in developing a System so that a student can enter in the professional community in the capacity of a system analyst or programmer.

## Course Contents:

**Introduction** : System Definition and concepts, System Environments and Boundaries. Realtime and distributed systems, Basic principles of successful systems, Structured System Analysis and Design

**Systems Analyst** : Role and Need of Systems Analyst. Qualifications and responsibilities. System Analysis as a Profession

**System Development Cycle** : Introduction to Systems Development Life Cycle (SDIC). Various phases of SDIC: Study, Analysis, Design, Development, Implementation, Maintenance

**Systems documentation consideration**: Principles of Systems Documentation, Types of documentation and their importance, Enforcing documentation discipline in an organization

**System Planning** : Data and fact gathering techniques : Interviews, Group Communication Questionnaires, Presentations & Site Visits. Assessing Project Feasibility: Technical, Operational, Economic, Cost Benefits Analysis, Schedule, legal and contractual, Political. Modern Methods for determining system requirements

**Modular and Structured Design** : Module specifications. Top-down and bottom-up design. Module coupling and cohesion. Structure Charts

**System Design and Modeling**: Process Modeling, logical and physical design, Conceptual Data Modeling: Entity Relationship Analysis, Entity-Relationship Modeling, DFDs, Concepts of Normalization. ,Process Description: Structured English, Decision Tree, Decision Tables. Documentation: Data Dictionary, Recording Data Descriptions

**Input and Output**: Classification of forms, Input/output forms design. User-interface design, Graphical interfaces. Standards and guidelines for GUI design.

**System Implementation and Maintenance** : Planning considerations. Conversion methods, procedures and controls. System acceptance criteria. System Evaluation and Performance. Testing and Validation. Preparing User Manual. Maintenance Activities and Issues

**OO Analysis / Design** : Introduction to UML OO Development Life Cycle and Modeling. Static and dynamic modeling. Comparison of OO and Module-oriented Approach. Modeling using UML

**Suggested Readings:**

- 1 J. Hoffer, "Modern Systems Analysis and Design", Second Edition, Joey George and Joseph Valacich, Pearson Education.
- 2 J. Whitten, L. Bentley and K. Dittman, "Systems Analysis and Design Methods", Fifth Edition, Tata McGraw Hill.
- 3 Dennis and B. H. Wixom, "Systems Analysis and Design", First Edition, John Wiley & Sons, Inc.
- 4 K. C. Laudon and J. P. Laudon, "Management Information Systems", Seventh Edition, Pearson Education.

# Database Management Systems

Code No. SE 114

L-4

T-0

Credits:04

## Objectives:

This course will allow students to develop background knowledge as well as core expertise in Database Management Systems. The students will learn Database concept, Data Models, various approaches to Database design, Normalization and Data Extraction and Manipulation

## Course Contents

### Introduction to Database Management Systems (DBMS)

Why Database, Characteristics of Data in Database, DBMS, What is database Advantage of DBMS, Data Abstraction, Data Models, Categories of Users

### Entity Relationship Model

Components of ER Model. ER Modeling Symbols. Super Class and Sub class types. Attribute inheritance. Specialization. Generalization. Categorization.

### Database Normalization

Keys, Relationships, First Normal Form., Functional dependencies, Second Normal form, Third Normal Form, Boyce-Codd Normal form, Case study

### Introduction to SQL

SQL data types and literals. Types of SQL commands. SQL Operators and their precedence, Tables-Create, Alter, Rename, Drop, Insert, Update, Delete, Queries and Sub-queries, Arithmetic Operators, Range Searching, Pattern Matching, Viewing sorted Data, Joins, Unions, Intersection, Minus. Aggregate functions, Group Functions, having, Commit, Rollback, Dual Table, Sysdate.Rowid, Rownum, indexes

String Functions-lower, upper, Substr, length, LTRIM, RTRIM, TRIM, LPAD, RPAD, CONCATENATE Function

Conversion Functions- to\_number, to\_char, to\_date

Date Functions – Add\_months, months\_between

Security Management using grant, revoke and views

**PL/SQL** – Advantages, Generic PL/SQL Block, Control Structures, Cursors, Procedures, Functions and Triggers

### Back up and Recovery

Database backups. Why plan backups?. Importance of backups,. Data storage. Causes of failures. Transaction logs.. Database recovery, Recovery concepts and terminology. Recovery techniques, Disaster Database Management System

**Suggested Readings:**

1. Ivan Bayross, SQL, PL/SQL- The Programming Language of Oracle, 3<sup>rd</sup> Revised Ed. BPB Publicaitons
2. H. Korth, A. Silberschatz, "Database System Concepts", Third Edition, McGraw-Hill Intemational
3. Elmasri, S. Navathe, "Fundamentals of Database Systems", Third Edition, Pearson Education
4. C.J. Date, An Introduction to database system concepts, 7<sup>th</sup> ed. Pearson Education
5. Leon and M. Leon, II Database Management Systems", First Edition, Vikas Publishing House (P) Ltd.
6. D.K. Kroenke, "Database Processing: Fundamentals, Design Implementation" , Prentice Hall of India
7. P.Bhattacharya and A.K Majumdar, "Database Management Systems", First Edition, McGraw Hill

## **DBMS Lab**

**Code No. SE 152**

**L-6**

**T-0**

**Credits:03**

The Lab will be based on the course Database Management System. Student is expected to achieve a level of competence in at least one of the standard commercial RDBMS products under desktop or multi-user environment to be able to develop a small to medium application

## Financial Management Services

Code No. SE 201

L-4

T-0

Credits:04

### Objective:

In today's financial environment, investment management requires an understanding of a multitude of different issues, from how investment objectives are determined to the best way to construct a portfolio given an investment strategy. This course provides a real-world financial knowledge with investment management theory to provide the practical guidance one need to succeed within the investment management arena. This comprehensive investment management resource offers valuable insights and analysis of all pertinent investment products while exploring a wide range of investment strategies.

**Foundations of Investment Management:** Investment: Meaning, Nature and Scope, Decision Process; Environment; Investment Risks – Interest Risk, Market Risk, Inflation Risk, Default Risk, etc; Valuation of Securities. Portfolio Analysis, Portfolio Selection and Portfolio Theories – Markowitz Model and Capital Assets Pricing Model. Portfolio Revision and Performance Evaluation of Managed Portfolios.

**Investing in Common Stock:** Common Stock Markets, Common Stock Portfolio Management Strategies, An Introduction to Financial Derivatives and their role in risk hedging and management. Types of financial derivatives – Futures, Options and Swaps. Valuation of Options – Binomial Option Pricing Model and Black & Scholes Model.

**Investing in Fixed Income Securities:** Bond Valuation, Portfolio Strategies, Risk Models and their Applications, Investing in Real Estates and Alternative Investment: Real Estate Investment, Private Equity, Asset Allocation.

**Quantitative Analysis for Financial Decisions:** Application of Linear programming, Goal programming, Regression analysis and simulation technique in financial decision making areas, application of multiple discriminant analysis

**Suggested Readings:**

1. Frank J.Fabozzi & Harry M Markowitz, “Theory and Practice of Investment Management” , John Willy and Sons ISBN 0471228990.
2. Robert L Hagin, “ Investment Management, Portfolio Diversification, Risk and Timing fact and fiction”, John Willey.
3. Kaptan S S , “ Investment Management” , ISBN 8176252182
4. Paper back , “Investment Management & Security Analysis” , ISBN 140392967
5. Bhalla, V K., “Investment Management”, Sultan Chand, New Delhi
6. Hampton John J. Financial Decision Making, Prentice Hall of India.
7. Levy, H. and Sarnat H. Capital Investment and Financial Decision, Englewood Cliffs, New Jersey, Prentice Hall.

# Enterprise Resource Planning and Business Application Programming

Code No. SE 203

L-4

T-0

Credits:04

## Objective:

Enterprise Resource Planning (ERP) is the latest business information technology tool in the corporate world today. In this course, we introduce concepts of ERP systems, types of ERP and the framework in terms of architecture, components and development workbench.

The Development Workbench is used for developing and running ERP Business Applications. It is a textual language with graphical managements, based on event driven techniques and is a hybrid language i.e. both procedural and object oriented programming concepts are used. With the Business Processes becoming more global, the language supports Business Processes in a Web Based Environment. It also supports development and operations for country specific, Multi lingual and Multi Currency environments. Above all, the language supports UNICODE character sets. Basic objective of this module is to learn Business Application Programming.

## Course Contents:

**Introduction to ERP:** Concept of ERP, Need of ERP, Advantages and Disadvantages of ERP, Functions of ERP, Overview of available ERP Packages and Tools, implementation methodologies, Requirement for Implementation, Phases of Implementation, Benefits of Implementation.

**Introduction to Business Application Programming:-** Transaction Codes, Using Editor, Creation of Program, Program naming conventions, syntax, write statement, chain operator..

**Data Types And Program Types :** Overview of available Data types and program types Defining variables with DATA and TYPES.

**Operators :-** Arithmetic Operators , Relational Operators, Logical Operators..

**Control Statements :-** If statement, while loop, do loop, case statement, exit, check and continue.

**Assignments ,Conversion and Calculations:-** Working with system variables, clear statement, move statement, move-corresponding statement, performing calculations.

**Data Dictionary:-**Data element, domain, table, view, structure, lock objects.

**Internal Tables :** Types of Internal Tables, Creation of Internal Tables, Linking Internal Tables with Standard Tables and DDIC Tables, Delete and update operations in Internal Tables.

**Modularization:-** Local Modularization and Global Modularization, Creation of subroutines, calling subroutines, creation of function group, creation of function modules, calling function modules.

**Query :-**Creation of user group ,creation of Info set, Assignment of user group to info set, creation of query.

**Selection Screens :** Creation of selection Screens, Events of Selection Screens, Use of parameter, select options, checkboxes, radio buttons.

**Dialog Programming :-**Basic principles, Layout, Flow Logic, Menu Painter, Screen Painter, Table control, Tab strip Control

**Reporting :** Classical Reporting , Interactive Reporting ,Events of Interactive reporting, System Variables used in Interactive reporting, Hide Concept, List formatting

**Logical Database:-**Creation of LDB, Get Function, Read Function.

**Data Transfer Techniques :** BDC, Creation of BDC,BDC Recording, Session Method , Call Transaction Method.

**Scripts:** Creation Of Scripts, Text Element, Text Symbols, Printing Scripts.

**Smartforms:** Creation of SMARTFORMS, Printing of SMARTFORMS.

**Cross Applications :-** ALE,IDOC,LSMW,BAPI,BADI.

**Suggested Readings:**

1. Garg , V. K. and Veket Krishna N. K., “ERP Concepts and Practice”, PHI Publication.
2. Ken Greenwood “Sams Teach Yourself ABAP/4 in 21 Days” TechMedia.
3. Dr Horst Keller “ABAP Objects” Galileo Press.
4. R. Lyfareff “Introduction to ABAP/4 Programming for SAP (Hardcover):” Prima Pub (Mass Market); 2 edition .

# Software Project Management

Code No. SE 205

L-4

T-0

Credits:04

## Objectives:

The purpose of this course is to prepare a manager to plan for software project that includes estimates of size and effort, a schedule, resource allocation, configuration control, change management and project risk identification and management.

## Course Contents:

**Introduction to Project Management:** Definition of the Project, Project Specification and parameters, Principles of Project Management, Project Management Life Cycle

**Software Project Planning,** Project Activities and Work Breakdown Structure, Activity Resource Requirements, Project Management Plan , PERT & CPM

**Project Scheduling and Tracking Techniques:** Why projects are delayed? Effort Estimation Techniques, Task Network and Scheduling Methods, Monitoring and Control Progress, Graphical Reporting Tools

**Project Economics:** Project Costing, Empirical Project Estimation Techniques, Decomposition Techniques, BEP, Automated Estimation Tools

**Risk Analysis and Management:** Risk Mitigation and Management, Software Metrics and Project Management

**Project Control and Closure,** Project Management Issues with regard to New Technologies

## Suggested Readings:

- 1 Clements and Gido, Effective Project Management, Thomson India Edition
- 2 Bob Hughes and Mike Cotterell, "Software Project Management", Third Edition, McGraw-Hill
- 3 Pankaj Jalote, "Software Project Management in Practice", Pearson Education Asia.
- 4 Robert T. Futrell, Donald F. Shafer, and Linda I.. Shafer, "Quality Software Project Management", Pearson Education Asia.
- 5 Ramesh Gopaldaswamy, "Managing Global Software Projects", Tata McGraw-Hill

# Human Resource Planning & Development

Code No. SE 207

L-4

T-0

Credits:04

## Objective:

The objective of this course is to develop a conceptual as well as a practical understanding of Human Resource Planning, Deployment and Development in Organizations.

## Course Contents:

**Introduction to Human Resource Management** develops the understanding of the theoretical inception of Human Resource Management from Personnel Management.

**Organization Management** encompasses the analysis of various structures of Organizations with particular reference to organizational design, process and change with the flow of the functional management bodies in the organizations.

**Human Resource Planning** introduces the major concepts of manpower planning including Recruitment and Selection, Promotion, Transfers and Superannuation to develop strategies in complex business environments.

**Training and Development Plan** addresses the individual learning needs and priorities, and explores the organizational and individual consequences of individual and collective actions and behaviors.

**Personnel Administration** develops the understanding of maintaining all the records of the employees like personal data, leaves and absences for payroll calculation in the database and retrieving the data as per requirements for maintaining healthy employee relations.

**Performance Management** addresses the performance assessment of the employees from time to time through various tools and techniques which enable them to grow faster in the complex business scenario.

**Human resource Information System** provides the opportunity to develop reports according to requirements, develops core competencies in data analysis and their integration in business decision making.

**International Human Resource Management** focuses on the understanding of the International activities of the Human Resource Management in the MNCs and the role of the expatriates.

**Suggested Readings:**

1. K. Aswathappa, "Human Resource and Personnel Management", Fourth Edition, , Tata Mc Graw Hill Publishing Company Ltd.
2. K.Prasad," Strategic Human Resource Management Text and Cases", First Edition, MacMillan India Ltd.
3. Parth Sarathi, "Planning Auditing and Developing Human Resources", First Edition, Manak Publications Pvt.Ltd.
4. M P Srivastava,"Human Resource Planning", Second Edition, Manak Publications Pvt Ltd.

## Human Resource Payroll

Code No. SE 209

L-4 T-0

Credits:04

### Objective:

The objective of this course is to develop a conceptual as well as a practical understanding of Human Resource Planning, Deployment and Development in Organizations.

### Course Contents:

**Introduction to Compensation Management** addresses the value of competitive pay, their human resources, and has an investment view of payroll costs. It helps to maintain pay levels that attract and retain quality employees while recognizing the need to manage payroll costs.

**Leave Management** introduces the different types of leaves that are prevalent in the Organizations as per the Human Resource Policies.

**Time Management** focuses upon the structuring of the entire scheduling of the employees, the working hours, the holidays based upon which the payroll has to be run and its integration with the Leave Management.

**Benefits Management** is concerned with the beginning and end of project management and surrounds each project.

**Payroll Management** addresses all the issues related to the payment calculations of an employee like basic pay, HRA, CA and CCA which directly leads to healthy employee relations and employee satisfaction.

### Suggested Readings:

1. K. Aswathappa, "Human Resource and Personnel Management", Fourth Edition, Tata Mc Graw Hill Publishing Company Ltd.
2. Steven M. Bragg, "Essentials of Payroll Management and Accounting".
3. Derek Torrington, Laura Hall, Stephen Taylor, "Human Resource Management", Sixth Edition, Pearson education.
4. Dr. N.K. Sahni, Yogesh Kumar, "Personnel Management", Kalyani Publications, Ludhiana,
5. Ashwallapa, "Human Resource Management", Himalaya Publication.

## Materials Management

Code No. SE 211

L-4 T-0

Credits:04

### **Objective:**

To acquaint students with different aspects of materials planning, procurement, accounting, preservation and control along with the effects of inventory on capital investment.

**Introduction to Materials Management** - Role of Purchasing and Materials Management, Objective, Organization and interrelationships, Determination and Description of material quality, Materials planning in push and pull system, MRP and JIT.

**Purchasing** – Procedures and documentation, Purchasing of capital equipment, Appraisal methods, Evaluating supplier's efficiency, Store management, Classification and Codification, Legal aspects of purchasing, public purchasing and tendering.

**Material Logistics** – Inventory fundamentals, Physical inventory and warehouse Management, Physical distribution, Just in time inventory, Total Quality Management.

**Production Planning System** – Material requirement planning, Capacity Management, Production activity control, Master scheduling.

**Forecasting and Order Quantities** – Demand management, forecasting Techniques, Order quantities, Independent demand ordering system.

### **Suggested Readings:**

- 1 MM Verma (Materials Management), Sultan Chand & Sons.
- 2 PG Gopalakrishnan & M. Sundersan (Materials Management), Prentice Hall of India.
- 3 Dobler D. W., Lamar Lee Jr. and D. N. Burt, Purchasing and Materials Management. McGraw Hill Publications
- 4 Baily P. etc. Purchasing Principles and Management, Pitman.
- 5 Gopalakrishnan Inventory Management & Cases Prentice Hall of India Pvt. Ltd., New Delhi.
- 6 Datta, AK., Materials Management: Procedures

## **Production Planning and Control**

Code No. SE 213

L-4 T-0

Credits:04

### **Objective:**

To focus on concepts for optimum Production and Operation Planning & Control and techniques & systems for Production/Operations Planning & Control.

### **Course Contents:**

Introduction Production/Operations, Management problems, issues, techniques & systems for Production/Operations Planning & Control

Capacity Planning & Investment Decisions, Demand forecasting for Production/Operations Planning & Control. Functions of Production Planning & Control, Aggregate Operations Planning & Scheduling Systems for mass production, flow shop, job shop, flexible manufacturing & process industries

Concept of Total Quality Management, Consequences and Charts of Total Quality, Developing a Quality culture, Total Quality Control. Statistical process control, Control Charts for attributes and variables, Strategic Quality Management; Quality and Environment Management Systems ISO 9000, ISO 14000 continues Quality improvement tools and techniques, Quality Audit, Case Studies.

Assembly line balancing concepts and techniques, Optimizing techniques for Operations, Planning & Control, Material requirement planning, Manufacturing Resource Planning and Enterprise Resource Planning. Techniques: Just-in-time concepts and scope in operations planning & control. Scheduling and sequencing concepts & techniques for a variety of operational situations. Network techniques (PERT/CPM)

### **Suggested Readings:**

1. Palanswamy, Production & Operations Management, Prentice Hall of India.
2. Matrinich, Joseph S., Production and Operations Management, John Wiley.
3. Richard B Chase, Production and Operations Management, Tata McGraw Hill.
4. Schroder, R. G. Operations Management: Decision Making in the Operations functions, McGraw Hill
5. F. S. Bulfa, & R. K. Serin. Modern Production/Operation Management, John Wiley & Sons
6. J. M. Juran, Quality Planning & Analysis, TMH
7. Bagchi, T. P. ISO 9000: Concepts Methods and Implementation, Wheeler Publishing, New Delhi.

## Sales & Distribution Management

Code No. SE 215

L-4 T-0

Credits:04

### Objectives:

The course aims to impart skills and knowledge needed to manage sales force and distribution function so as to gain competitive advantage. As a successful marketer, the sales and distribution function needs to be properly managed which incorporates understanding of various concept

### Course Content:

**Introduction to Sales Management:** The Sales Management Function- Scope and Importance, Selling Skills and Selling Strategies, Selling Process, Management of Sales Information, Study of Sales Organization Structure, Management of Sales Territories and Management of Sales Quota.

**Sales Force Management:** Sales force job analysis and Description, Sales force Recruitment and training for the Sales person, Sales Force Motivation, Sales Force Compensation, and Evaluating the Sales Force Performance.

**Distribution Planning and Control:** Role and Function of Distribution Channels, Process of Selection for Distribution Channels, Distribution Analyses, Channel Dynamics -Vertical Marketing System, Horizontal Marketing System, Multi Channel Marketing System.

**Distribution System and Logistics:** Physical Distribution System – Decision Area, Different Mode of Transport, Their Characteristics logistics Introduction – Functional Areas of Logistics, Distribution Cost, Control of Customer Service, Supply Chain, Management and integration of Sales and Distribution.

### Suggested readings:

1. Tapan Panda and Sunil Sahdev, Sales and Distribution Management , Oxford University press.
2. S.Gupta, Sales and Distribution Management , Excel Books
3. *L.J. Ades. The Art of Sales Management* - McGraw-Hill.

## Customer Relationship Management

Code No. SE 217

L-4

T-0

Credits:04

### Objectives:

The course aims to impart skills and knowledge needed to manage the Customer Relationship function so as to gain competitive advantage. As a successful Relationship Manager The Customer Relationship Management needs to be properly managed which incorporates understanding of various concept

### Course Content:

**Introduction to CRM-** Introduction to CRM, Consider CRM in your business strategy, Initial CRM Considerations, Preparing for Technical Implementation.

**The Customer Service/Sales Profile:** Why call it the customer Service /Sales Profile, Three levels of Sales and Services, Importance of the Organization and Business Process of the Organization, Shape of your customer Services and Sales Profile, CRM and your profile Tool for Capturing Customer Information.

**Pre-Order Customer-Support Issues:** Online Visibility via Search Engines, Real time Access to Product Information, Inventory Integration, International Business, Shipping, Order Tracking.

**Point of Order Customer- Support Issues:** Understanding Point of Order issues, Ensuring a Smooth Ordering Process, Providing an Intuitive Site Navigation Scheme.

**Post Order Customer- Support Issue:** Tracking Order, Managing Relationship Through Conflict.

### Suggested Readings:

- 1 Kristin Anderson and Carol (Customer Relationship Management) Kerr (Tata Mcgraw-Hill),
- 2 Jeffrey Peel CRM, Digital press June 15, 2002
- 3 John W.Gosney and Thomas P.Boehn (Customer Relationship Management)
- 4 ED Peelen (Customer Relationship Management) May-2005 PEARSON BOOK

## Database Administration

Code No. SE 219

L-4

T-0

Credits:04

### Objective:

This course gives the database administrator (DBA) a firm foundation in database fundamentals, backup and recovery operations and Net administration. Students learn about transporting data between databases and the utilities used to perform these activities. Students are also introduced to networking concepts and configuration parameters, as well as how to solve some common network problems.

**DBA Fundamentals I:** Oracle Architectural Components, getting started with the oracle server, managing an oracle instance, Creating a database, using the data dictionary, Maintaining Redo Log Files, Managing Tablespaces and Data Files

**DBA Fundamentals II:** Backup & Recovery + Networking; Basic oracle net architecture, basic oracle net services server-side configuration, Basic oracle net services client – side configuration; usage and configuration of the oracle shared server

**DBA Performance Tuning:** Overview of performance tuning; diagnostic and tuning tools, sizing the shared pool, sizing the buffer cache, Database configuration and I/O issues, Monitoring and Detecting lock contention, using oracle blocks efficiently

### Suggested Readings:

1. Loney & Koch, Oracle 9i DBA, TMH
2. Freeman, Oracle 9i RMAN backup & Recovery, TMH
3. Sumit Sarin, Oracle DBA, Tips and Technology, TMH
4. Richard J Niemiec, Oracle 9i Performance Tuning, TMH

# Operating Systems

Code No. SE 221

L-4 T-0

Credits:04

## Objectives:

This course is meant to enable the students to understand and apply the concepts, principles & techniques of Operating Systems. The course is designed to provide the following objectives:-

- Concept of Operating systems
- Security and administrative Features
- Design and implementation of Operating System
- Functional Modules of and Operating System
- Concepts of Unix and Shell Programming

## Course Contents:

**Introduction of Operating System** : What is Operating System, Evaluation of Operating System, Types of Operating System, Design and implementation of Operating System

**Process and Threads** : Concept of Process, Process model, Process hierarchies, process states, Concept of Threads , Process Scheduling , Interprocess Communication, Semaphore , monitors , Critical Section , conditional critical section.

**Deadlocks** : Concept of Deadlock and Resources, deadlock detection, prevention ,avoidance and recovery.

**Memory Management** : Concept of memory management, Swapping, Virtual memory, paging, page replacement algorithms, segmentation.

**File Management** : Concept of File Management , Disk management, disk caches and buffers, disk scheduling .

**UNIX/LINUX** :Concepts of UNIX ,process in UNIX, file management in UNIX, Input/output in UNIX.

**Shell Programming** : Basics of Shell Programming, VI Editor, Command Syntax, Compound Command Syntax, Simple variables , Parameters, basic tests, loops, case and select statement , Patterns and expressions., substitution, I/o and TRAP Processing.

## Suggested Readings:

1. Abraham Silberschatz, Operating System Principles, 7<sup>th</sup> Edition, Wiley –India Edition.
2. William Stallings, “Operating Systems” Pearson Education ,4<sup>th</sup> Ed..
3. Milenkovic, “Operating System concepts and design, Tata Mc-Graw Hill ,2<sup>nd</sup> ed.
4. Andrew S. Tanenbaum “Modern Operating Systems “ Pearson Education .
5. Christopher vickery “Unix Shell Programming’s Introduction Workbook” Prentice Hall PTR .
6. Yashvant Kanetker “Shell Programming “ ,BPB.

## **Business Application Programming Lab**

Code No. SE 251

L-6 T-0

Credits: 03

The Lab will be based on the course Business Application Programming

## **Summer Training Project**

Code No. SE 253

Credits:02

Each student will undergo eight weeks Summer Training in any industrial organization. After the training the students will submit their Summer Training Project Reports (in duplicate) within a period of one month in the concerned institute/school; this period shall be counted from the last date of completion of their Summer Training. The supervisor in the organization under whose guidance the summer training is carried out will be required to grade the student's project in the format prescribed by the university. Each student will be attached with one internal project guide, with whom they shall be in continuous touch during the training period. The internal project guide will be required to evaluate (out of 40 marks) on the basis of the assessment report provided by the organization where the Summer Training has been completed and his/her own assessment about the work done by the student. The evaluation of the remaining 60 marks shall be made by external examiner appointed by the University who shall evaluate on the basis of presentation and the assessment report received from the organization where student has undergone Summer Training.

## Minor Project Work

Code No. SE 255

Credits:02

Every student will be assigned a minor project in the beginning of the third semester. The project will have to be pursued by him/her under the supervision of either an internal supervisor or professionally qualified supervisor from the industry. The Project Reports (one copy) along with one soft copy will be submitted by the students prior to the date of the commencement of the End-Term Examinations for the Third Semester.

The Project shall carry 100 marks and it shall be evaluated in two parts. By the External Examiner appointed by the University for 60 marks and for the remaining 40 marks by an internal Board of examiners to be appointed by the Director/Principal of the Institute which shall consist of minimum two faculty members. This internal Board of Examiners shall comprise of a minimum of two Internal Faculty Members.

## Corporate Strategy & Policy

Code No. SE 202

L-3

T-0

Credits:03

### Objective:

To develop an understanding of the nature and scope of corporate planning, its techniques and determinants, corporate policy – key issues and features. This course aims at developing a holistic perspective of an organization and making conversant the students with the process that facilitates decisions having strategic perspective.

### Course Contents:

**Nature of Corporate Planning:** Scope and Business Policy as an area of study.

**Strategic Management Process:** An Overview, Vision, Mission, Establishment of Organizational Direction, Corporate Management.

**Techniques of Corporate Planning:** Formulation of Strategy: Company's environment and its analysis; Tools and Techniques for Strategic Analysis: A Resource-Based Approach, Concept of Value chain, SWOT, Industry analysis, Business Level Strategies: Focus and Cost Leadership, Corporate Level Strategies – Managing conglomerates, Mergers and Acquisitions, Strategic Alternatives and Evaluation Models – BCG Growth/Share Matrix, Stop Light Strategic Model; Directional Policy Matrix Model, Porters' Five Forces Model, Ansoff's Matrix, Framework for Strategic Excellence Positions (SEPs). Relevance of projective analysis. Forecasting models. Factors governing corporate plans.

**Corporate (Business) Policy** – Determinants, key issues and feature, Social aspects of corporate policy.

**Corporate Governance Model** – Role of CEO and the Board. Corporate planning and policies in a global perspective. Implementing Strategy – issues related to organizational structure, climate and culture, mergers and acquisitions, employee recruitment selection and development selection and development; Process and criteria of strategy evaluation; Case Method of Study.

**Suggested Readings:**

1. Saloner, Shepard, and Podolny, "Strategic Management", John Wiley and Sons.
2. Russel L. Ackoff, "A Concept of Corporate Planning", Wiley.
3. Basil W. Denning (ed), "Corporate Planning: Selected Concepts", McGraw-Hill, NY.
4. D. E. Hussey, "Introduction to Corporate Planning", Pergamon, Oxford.
5. Ghosh, P. K., "Business Policy: Strategic Planning and Management", Sultan Chand.
6. Argenti, "Corporate Planning – A Practical Guide", George Allen & Unwin, London.
7. William F. Glueck & Lawrence R. Jauch, "Business Policy and Strategic Management", 5<sup>th</sup> Edition, McGraw Hill.
8. Peter F. Drucker, "Management Task, Responsibilities, Practices", Allied Publications.
9. BSKS Chopra, "Business Policy for Indian Industries", Times Research Foundation, Pune.

## Financial Accounting (ERP)

Code No. SE 204

L-4 T-0

Credits:04

### Objective :

Globalization and diversification today force structural changes in organizations throughout the world, making economic processes more complex. These processes are also made more dynamic through product and process innovation and use of the information highway. All of these require more coordination and control with increasingly shorter response times.

The main objective of this module is to understand accounting system using ERP with its various sub units. To integrate the various aspects of accounting with each other and with logistics and human resources applications, they become a management tool for all company departments.

This process is not limited by the size of a company. Organization ranging from a small sales office to an international corporate group can use these functions. The real-time functionality of the ERP modules allows for better decision making and strategic planning. The FI (Financial Accounting) Module integrates with other ERP Modules such as MM (Materials Management), PP (Production Planning), SD(Sales and Distribution), PM (Plant Maintenance),and PS (Project Systems).

The FI Module also integrates with HR(Human Resources) which includes PM(Personnel Management), Time Management, Travel Management, Payroll. Document transactions occurring within the specific modules generate account postings via account determination tables.

### Course Contents:

**Introduction to ERP Finance:** Accounts Receivables, Accounts Payable, Asset Accounting, Bank Accounting, Consolidation, Funds Management, General Ledger, Special Purpose Ledger, Travel Management

**General Ledger Accounting:** Introduction, GL account posting, Park & hold document, Incoming & Outgoing payment, Evaluate foreign currency, Reference &-Sample document, A/C assignment model, Recurring document, Cross Company relations & document , Document reversal & GL fast entry

**AR-AP Accounting:** Introduction, Creating invoice/credit memo, Park & hold document, Incoming & Outgoing payment, Payment fast entry, Reference & Sample document, Recurring document & Document reversal, Down payments & Bill of exchange

**Global Settings:** Set countries & Currencies, Maintain calendar

**Enterprises Structure:** Definition & assignment of Company, Company code, Credit control. Business area & Consolidated business area, Functional area

**Financial Accounting Global Settings:** Company cods & Business area, Fiscal year, Document Posting periods, Non jurisdiction tax on sales /purchase

**Financial Accounting - General Ledger:** Chart of Accounts, GL accounts, Integration, Carry forward of balances, Financial statement version

**Financial Accounting ARAP:** Creating sub ledgers, Creating customer group & master accounts, Creating vendor group & master accounts, Incoming & Outgoing payment global settings, Down payments, Bill of exchange, Interest calculation

**Financial Accounting - Fixed Assets:** Creating fixed assets, Acquisition & Transfer of assets, Retirement, Plan depreciation, Book depreciation

**Controlling:** Cost Element Accounting, Cost Center Accounting, Internal Orders, Activity-Based Costing ( ABC), Product Cost Controlling, Profitability Analysis, Profit Center Accounting

### **Suggested Readings**

1. Quentin Hurst & David Nowak, Configuring SAP R/3 FICO, BPB
2. SAP Cook Book Financial Accounting, Equity Press

# Human Resource Management

Code No. SE 206

L-4

T-0

Credits:04

## Objective:

Human Resource is a complete integrated system for supporting the planning and control of personnel activities, which consists of: HR Concepts, Organizational Management, Personnel Management, Time Management, Payroll Administration, Human Resource Information System (HRIS), Training and Event management and Benefits Management.

Basic objective of this module is to understand HR concepts and their activities using standard ERP solutions.

## Course Contents:

**Overview of HR Practices** provides a flair of the different Human Resource practices like Organization Structure, Recruitment and Selection, Training and Development etc.

**ERP HR concepts** :Setting of Enterprise Structures, Personnel Areas, Personnel Sub areas, Employee Groups and Employee Subgroups.

**Organization Structure:** Defining Organizational Units, Jobs, Positions and Tasks.

**Recruitment and Selection:** Creating Vacancies, Creating Advertisements, Data Maintenance of applicants, Monitoring status of applicants, working out requirement profiles, profile matching , selection of employees, transfer of applicant data to employee data.

**Personnel Administration:** Creating HR Master Data, Data Maintenance of employees in infotypes, Creating actions, Creating info groups, executing actions.

**Time management:** Creating Public Holiday Calendars, Work Break Schedules, Daily Work Schedules, Periodic Work Schedules, Work schedule rule, Defining exceptions, Configuring leave, absences, attendance, Defining substitutions, availability, Time types , processing types, Time recording, Processing (line data), Time evaluation.

**Payroll Administration:** Defining payroll area, pay scale area, pay scale types, pay scale structure, Setting up pay scales and levels, Wage types, Configuring Basic pay, Recurring Pay and allowances, additional payments, Running payroll

**Benefits:** Creating Benefits Areas and configuring benefit plans, Eligibility, costs and credits, Maintaining Benefit infotypes.

**Training and Development:** Models & Succession models, Creating &. Marketing Training, Seminar and Convention Management Creating Business events groups, Business event types, Creating Resources, cost elements, Marketing Business Events, Integration with components.

**HRIS Creating Master data...** Personnel events, wiring, relocation, Maintaining infotypes, Reports, Optical Archiving

**Suggested Readings:**

- 1 Jonathan Blain and Bernard Dodd, “Administering SAP R/3 : The HR-Human Resources Module”, 1999, Prentice Hall India.
- 2 Jim Stewart, “My SAP HR”, Equity Press
- 3 Chrestian Kramer, seven Ringle and Song Yang, “Mastering HR Management with SAP”, Equity Press

## Sales & Distribution

Code No. SE 208

L-4

T-0

Credits: 04

### Objective:

Marketplaces pressures today drive companies to simultaneously reduce both costs and time to market, while improving product quality and capability. Every firm struggles to reengineer itself, its production processes and its Products to meet these requirements. As a result, the successful business of tomorrow will be fundamentally different from the business leaders of today. These differences will extend to every aspect of information systems. Basic objective of this module is to understand Sales & Distribution Process using ERP and integration of other components.

### Course Contents:

**Introduction** of Sales & Distribution (SAP).

**Enterprise Structure Creation:** Organization Structure for Sales and distribution and integration with MM, PP and FI

**Master Data:** Customer and material master Record.

**Pre Sales Activity:** Inquiry, Quotation.

**Sales order Processing:** Creation of sales order, creation of sales order with reference, Item categories and Schedule line categories.

**Pricing:** Condition Technique, Condition Type (Price, Discount) and Condition Record, Condition Table, Pricing Procedure and Pricing Procedure Determination.

**Fast Material Entry in Sales Order:** Product Proposal, Material Listing and Exclusion and material Determination Free Goods.

**Special Business Processes:** Consignment, Rush order, Cash sells

**Batch Management:** Class, Characteristics, Classification and Creation of Batch.

**Shipping:** Processing deliveries, Delivery types, packing and picking, Post good issues.

**Billings:** Billing document types, Invoices, Performa invoices, Cancellation of invoices.

**Rebate Agreements:** Creation of Rebate Agreements, Customer Rebate and Material Rebate.

**Credit Management:** Credit master data, Credit policies, Credit Check types, Credit limit.

**Sales Information System:** Tables, Fields, and Reports.

**Suggested Readings:**

- 1 Glynn C. Williams, Implementing SAP R/3 Sales and Distribution, TATA McGraw-Hill.
- 2 Jobber, Selling and Sales management, 6th ed., NBC India.
- 3 Equity Press, SAP Cook Book Sales & Distribution, Equity Press

# Materials Management

Code No. SE 210

L-4

T-0

Credits:04

## Objective:

The materials management application component supports materials management functions and processes in day-to-day business operations. Hardly any other field makes such wide-ranging and conflicting demands on a standard software package. This is due to: industry specific requirements, product specific features and factors involving company policy. Moreover, there are links and interfaces to other commercial applications.

The basic objective of this module is to understand MM (Materials Management) application using standard ERP and their components which includes:

- Material requirements planning,
- Material procurement
- Inventory management
- Invoice verification
- Material valuation
- External services management

## Course Coverage:

### Overview of Materials Management (SAP) Module:

**Purchasing:** Material master creation, maintenance of different views, Vendor master creation Purchase info record creation, Source list, creation and maintenance, Quota arrangement maintenance and its importance, Purchase requisition creation, RFQ/Quotation creation, Purchase order creation and maintenance through different method. External service management (creation & maintenance of PR/PC) Outline agreement -contract, scheduling agreement, creation of special master

**Inventory Management:** Overview and significance of inventory management, Creation of GR with and without P.O., Good; issue with different methods, Transfer posting & Stock transfer Reservations, Consignment stock, Pipeline material -creation, handing, GI etc. Returnable transport packaging (RTP), Maintenance of different type of stocks like Quality, blocked etc.

### Maintenance of batch management concept

**Invoice Verification:** Entering invoice & credit memo, Releasing invoice, Canceling Invoice and credit memo, Invoices in the taxes, cash discount, Logistic invoice. Verification, Setting pipeline and consignment liabilities, Subsequent debit/credit.

### Warehouse Management

**Consumption Based Planning:** MRP and lot sizing procedure, Forecasting parameter and result, planned order planning file.

## **Vendor evaluation**

**Enterprise structure creation**-Organization structure for Material Management and Integration with other Module like PP, SD and FI.

## **Basics of material valuations**

## **Split valuations**

### **Suggested Readings:**

1. Arnold, Introduction to Materials Management, 5th ed., Prentice hall
2. Equity Press, SAP Cook Book Material Management, Equity Press
3. Martin Muray, SAP - MM - Functionality and Technical Configuration, ISBN TBD, H1912.
4. Stephen Birchall, Invoice Verification

## Production Planning

Code No. SE 212

L-4

T-0

Credits:04

### Objective:

The basic objective of this module is to understand Production Planning concepts using standard ERP solutions, integration with other components and implementation.

### Course Contents:

**Introduction:** Overview of PP module, Relationship with other modules, Basic process flow chart & navigation

**Classification System:** Characteristics, Classes

**Material Master:** Function and use of Material Master, Data in Material Master records, Material Types & Industry Sectors, Creating Material Master record, MRP I, MRP II views, Forecasting, Work Scheduling views

**Sales & Operation Planning (SOP):** Planning Method, Planning Table, Data Maintenance, Resource Leveling , Transforming SOP data to demand Management

**Work Centers:** Introduction, Capacity Data, Creating Work Center, Customizing Parameters

**Creating Routing :** Material Components, Production Resources & Tools, Scheduling of Routing Operation creation and Assignment

**Demand Management & Planning Strategies:** Functions in Demand Management, Planned Independent requirement, Customer Requirement

**Bills of Material:** Maintaining Simple BOM, Variant and Multiple BOM

**Production Orders:** Creation, Routing, BOM Solution, Scheduling, Availability check, Order release

**Capacity Planning:** Capacity evaluation, Procedures, Related functions, Capacity Leveling

**Consumption Based Planning:** Consumption Based Planning, Re-order Point Planning, Forecast Based Planning, Time Phased Planning

**Material requirement planning:** MRP functions in R/3, Overview of Material Planning Procedures, MRP, MPS Master Data for MRP, Scheduling, BOM explosion, Dependant Requirements, Carrying out MRP, Single item (single & multi level), Net requirement Calculation, Lot Size calculation

### Suggested Readings:

1. Rardy Haubner , Administering SAPR/3: The Production and Planning Module ,A SAP world consultancy; Que publication.

## System Administration

Code No. SE 214

L-4 T-0

Credits:04

### Objective:

The ERP Programming Language (ABAP) is used for developing and running ERP BUSINESS Applications. It is a textual language with graphical elements, based on event driven techniques and is a hybrid language i.e. both procedural and object oriented programming concepts are used for language development.

All the ERP Business Application modules such as FINANCE, HR, SALES, and MATERIALS etc are enveloped based on this language. Since running Business applications are based on Database Operations and require a DATABASE and SQL language, a special set of SQL language is embedded with this ERP language.

With the Business Processes becoming more global, the language supports Business Processes in a Web Based Environment. It also supports development and operations for country specific, Multi lingual and Multi currency environments. Above all, the language supports UNICODE /Non-Unicode character sets.

Since the language is developed in a text form it is more natural and therefore easy to learn and develop new Applications. A separate Development Workbench is available to develop New Applications using Textual and Graphical Tools.

Basic objective of this module is to learn Business Application Programming and System Administration.

### Course Contents:

**Overview:** Concepts of ERP and SAP.

**Architecture in SAP R/3:** SAP R/3 Client/Server Architecture, Presentation Layer, Application layer, Database layer, Concepts of SAP Net Weaver

**Getting Started:** Starting the Database and SAP R/3 Instances, Stopping SAP R/3 Instances and the database, Starting the front-end, using the front-end, Using SAP system, Transactions and Menu Paths.

**Service and Support** :-Remote connection, SAP Services ,Essential Services, Support Tools, SAP Solution Manager overview.

**Installation Concepts:** Preparations, Architecture of the R/3 setup installation Tool, Installation Steps, Changes with the SAP Web Application Server, Post processing

**Setting Up the System Landscape:**-Initializing the change and Transport System, Tasks of a System Landscape, Configuration of the Transport Management System, Transport Control program tp, Transactions and Menu Paths.

**Client Administration:** Creating New Clients, Local Copy, Remote Copy, Client Transport, Special Functions, Transactions and Menu Paths.

**R/3 Users Authorizations:** Basics, User Maintenance, Authorizations, Personal setting, Internet Users, Information About Users and Authorizations, Central user Administrations, Transactions and Menu Paths..

**Background Processing:** Concepts, Definition of Background Jobs, Analysis, Analysis Functions, Authorizations, Maintenance Jobs, External Interface, Transactions and Menu Paths.

**Update:** Update Concepts, Configuring the Update System, Monitoring and Troubleshooting for the Update

**Output Configuration and Management:** Basics, Configuring Spool work Process, Configuring the Spool Server, configuring the Output devices Landscape, Analysis and Error Correction

**Data Archiving:** Archive Development kit, Customizing, Control and Analysis

**Data Distribution and Transfer:-**RFC Destinations, Application Link Enabling (ALE), Data Transfer, SAP connect, Transactions and Menu Paths.

**Maintaining Instances :** Profile Maintenance, Operation Modes etc

**System Monitoring :**Server and Process Overviews, User Overviews, System Log, Analyzing runtime errors, Trace Files, Lock Entries, Performance Monitoring, Database Administration, Overview Of Regular Tasks

**Monitoring Architecture:** Alert Monitor, Customizing the Alert Monitors, Analyzing the Alert Monitors

**System Administration:** Concepts of System Administration, BASIS Daily Tasks, BASIS Weekly Tasks, BASIS Monthly Tasks, BASIS Annually Tasks, Concept of Backup And Recovery.

### **Suggested Readings:**

- 1 Jose Antonio Hernaudz, SAP R/3 Administrator's Handbook, Mc Graw Hill, 3<sup>rd</sup> Edition.
- 2 Lian Will, SAP System Administration, BPB, 2<sup>nd</sup> Edition
- 3 Robert E. Parkinsion, John Marneweek Victor Wood, Basis Administration for SAP, Premier Press.

## **Financial Accounting (ERP) Lab**

Code No. SE 252

Credits:02

The Lab will be based on the course Financial Accounting (ERP). Student is expected to achieve a level of competence by using any ERP package.

## **Elective Lab**

Code No. SE 254

Credits:02

The Lab will be based on the course ERP Elective chosen by the student.

## **Dissertation**

Code No. SE 256

Credits:08

The student will submit a synopsis at the beginning of the semester for the approval from the project committee in a specified format. Synopsis must be submitted within 2 weeks of the beginning of the semester. The first defense for the dissertation work should be held within one month. Dissertation report must be submitted in a specified format to the committee for the evaluation purpose.

## **Seminar and Progress Report**

Code No. SE 258

Credits:01

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## **Comprehensive Viva**

Code No. SE 260

Credits:01

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