



BHARATI VIDYAPEETH UNIVERSITY, PUNE

(Established u/s 3 of the UGC Act, 1956 vide Notification No. F.9-15/95-U-3 of the Govt. of India)

‘A’ Grade Accreditation by NAAC

Social Transformation Through Dynamic Education...

SCHOOL OF DISTANCE EDUCATION

PROGRAMME GUIDE

OF

**MASTER OF BUSINESS ADMINISTRATION
(INFORMATION TECHNOLOGY)**

MBA (IT)

Course: Master of Business Administration – Information Technology (MBA - I. T.)

The Master of Business Administration - I. T. programme is of three years duration comprising of Sem –I & Sem-II (Part – I), Sem-III & Sem – IV (Part-II), Sem- V & VI (Part – III)

1. Aims and objectives of the course: -
 - a) To equip students with knowledge and skills to be able to perform their role as versatile and integrated Entrepreneurs and Intrapreneurs.
 - b) To cultivate competencies for performing both as strategists and recipients in the national and international context of change.
2. Nomenclature of the course: - Annexure – I
3. Abbreviation of the course: MBA - I. T.
4. Name of the faculty: - Faculty of Management
5. Academic year in which course has been initiated: - 2010-11
6. Eligibility criteria for admission to the course:

A graduate degree (10+2+3 or equivalent) in any discipline with minimum 50% marks (45% for SC/ST) from any recognized University.

7. Teaching scheme of the course:

The Personal Contact Sessions and Seminars will be conducted at the Academic Study Centers during weekends (Sundays or Saturdays) and Public holidays. There will be 60 hours devoted to these sessions for theory as well as practical work.

8. Structure of the course: - The programme is divided into 6 Semesters consisting of 32 courses including summer training after completion of First Year and 6 month Internship Project in an organization.
9. Standard of Passing: -

In order to pass the course, a candidate will have to obtain minimum 40% marks in each head of passing.

Student is required to pass separately Internal and External Evaluation as per given below in the table:

Evaluation	Maximum Marks	Minimum Passing Marks
Internal	30	12
External	70	28

To pass the examination a student must obtain 50% of marks in aggregate for the entire examination consisting of Sem –I & Sem-II (Part – I) or Sem-III & Sem – IV (Part-II), Sem- V & VI (Part – III) separately.

10. Rules pertaining to supplementary / reappearing in external examinations, if not passed the examination as per rules of passing.
Students are required to submit assignments to the centre before the commencement of the external semester for the semester for which they will be considered for internal evaluation.

If a student fails to secure 40 % marks in Internal / External evaluation separately in each head of passing then he / she must appear in the subsequent Internal / External exam to pass in the examination

If a student fails to secure 50% marks in aggregate in the entire examinations then he / she must appear in the subsequent either part I and II or part-III University examination

11. Rules of ATKT (Allow To Keep Term): -

A student is allowed to carry the backlog of courses prescribed for Sem-I, Sem-II and Sem-III respectively to the next semester.

However a student will not be allowed to appear for Semester –IV examination unless all the courses of Sem-I and Sem-II are cleared with at least 40% of marks in each head of passing.

A student will not be allowed to appear for Sem VI, unless Sem- III and IV are cleared with at least 40% of marks in each head of passing.

12. Award of Classes: -

The award of class will be based on aggregate marks obtained by a student in Part –I, Part –II & Part-III examination taken together

First class with Distinction	70% & above
First Class	60% & above but less than 70%
Second Class	50% & above but less than 60%
Fail	Less than 50%

13. Rules for conduct of examinations

- a) Students would be required to keep a track of the last dates to pay examination fees, which will be announced well in advanced. Only those students who fulfill all the eligibility criteria shall be permitted to fill in the form.
- b) Students should procure their admit cards which will be given at the end of the semester before the examination for appear in the examination
- c) A student is expected to adhere to high standards of honesty during examination.
- d) During the examinations, students should not indulge in any unfair practices. If so, he shall be debarred from taking the remaining papers and may have to lose one semester or year depending upon the gravity of the offence.
- e) The result / mark –sheets have to be obtained from Academic Study Centre within 30 days of declaration of result.

14. Basis for allocation of marks for

- a) Internal Assessment: - 30 marks
- b) Theory (External evaluation) 70 Marks
- c) Internship Project/ Summer Training Project: 100

15. Procedure for conduct of Internal Tests / Term work/ Internal Assessment

Every Student will have to submit two assignments for internal assessment in each semester for each subject.

16. Pattern of Evaluation and Examination & Procedure for the evaluation of Summer Training Project / Internship Projects and conduct of viva

The evaluation in each course shall consists of 100 marks (70 marks for Semester end examination and 30 marks for Internal Assessment)

A candidate will be evaluated in each course depending on learning objectives and requirements of the course contents.

The scheme of marks consists of 30% weight age to continuous internal evaluation by the Subject teacher and 70% to evaluation based on Semester –end Examination consisting of written papers. Oral or Viva – Voce examination based on Practical work, Field Study, Project Report.

The details of course – wise mode of evaluation and examination are as given below

Semester –end Examination	Subject Code / Course No.	Method of evaluation and Examination
Semester I	101 to 105	Written Papers of 3 hours duration with 70 marks each at Semester –end examination conducted by the University
	106	Practical and viva examination carrying 100 marks conducted by the Department in association with Industry Practical will be conducted on basis of Course No. 102. Students are expected to work on application software such as Word Processors, Spreadsheet Package and Presentation skills required for managers.
Semester II	201 to 205	Written Papers of 3 hours duration with 70 marks each at Semester –end examination conducted by the University.
	206	Practical and viva examination carrying 100 marks conducted by the Department in association with Industry Practical and viva voce will be conducted on basis of course no 201 & 202. Students are expected to do practical on internet technologies and write programs in C++.
Semester III	301 to 305	Written Papers of 3 hours duration with 70 marks each at Semester – end examination conducted by the University.
	306	Practical and viva examination carrying 100 marks conducted by the Department in association with Industry Practical and viva voce will be conducted on course no 302 & 303. Students are expected to do practical on database implementation using Oracle and Visual Basic.
Semester IV	401 to 405	Written Paper of 3 hrs duration with 80 marks each at Semester – end Exam conducted by the University.
	406	Practical and viva voce will be conducted on course no 406. Students are expected to do practical on Java.
Semester V	501 to 505	Written Papers of 3 hours duration with 70 marks each at Semester – end examination conducted by the University.
	506	Practical and viva examination carrying 100 marks conducted by the Department in association with Industry. Viva will be based on the analysis part of project which they are to develop in Semester VI.

Semester VI	601	Written Papers of 3 hours duration with 70 marks at Semester – end examination conducted by the University
	602	Evaluation based on Internship Project carrying 50 marks, evaluated by the Department in association with industry professionals Viva based on presentation on Internship Projects Project carrying 50 marks, conducted by the Department in association with industry professionals

17. Pattern of question paper

The final examination question paper for each subject has 2 sections i.e. I & II

a) Section –I is based on theoretical concepts.

b) Section –II is based on practical application and case studies

Annexure- I
Nomenclature of the MBA- IT Programme -

MBA –Course Structure

Semester –I

Sr. No.	Course No.	Subject
1.	101	Fundamentals of Information Technology
2.	102	Office Automation
3.	103	Managerial Economics
4.	104	Organizational Behavior
5.	105	Managerial skills Development
6.	106	Practical Viva Voce

Semester –II

Sr. No.	Course No.	Subject
1.	201	Internet Programming for Business applications
2.	202	Programming with C++
3.	203	Analysis & Design of Information Systems
4.	204	Business Accounting
5.	205	Data analysis for Management
6.	206	Practical Viva Voce

Semester –III

Sr. No.	Course No.	Subject
1.	301	E-Business and Cyber Laws
2.	302	Database Management with Oracle
3.	303	Visual Programming & Multimedia Management
4.	304	Marketing Management and Research
5.	305	Human Resource Management
6.	306	Practical Viva Voce

Semester –IV

Sr. No.	Course No.	Subject
1.	401	Programming with Java
2.	402	Computer Networks and Networking
3.	403	Data Warehousing and Data Mining
4.	404	Financial Management and Control
5.	405	Knowledge Management
6.	406	Training Project

Semester –V

Sr. No.	Course No.	Subject
1.	501	Project Management
2.	502	Innovation and Technology Management
3.	503	I T Enabled Services
4.	504	Information System audit
5.	505	Management Sciences and Decision Technology
6.	506	Practical Viva Voce

Semester –VI

Sr. No.	Course No.	Subject
1.	601	Advanced Internet Programming
2.	602	Internship Project

Course Code : 101

Course Name : FUNDAMENTALS OF INFORMATION TECHNOLOGY

Objectives :The students are provided detailed understanding of components of computer, their functions and software types; Data representation and numbering systems are also covered. In addition, this paper also deals with role of data communication media, LAN, WAN, Internet etc. and usage of Internet for effective business functions.

Course Contents:

- 1. System concepts: Definition, Architecture, Elements and types of systems - Applications of IT in different fields: education and training, Industrial applications - engineering design, Communication, public utilities, simulation, genetics, artificial intelligence, entertainment, virtual reality, robots, Introduction to flow charts and algorithms with illustration.**
- 2. Task Performing System: Components of DOS model - hardware, operating system, application package, and user. Types of users, sub division of OS - User interface and Kernel. Interaction among the components with example emphasizing on introduction to jargons such as browsers, assemblers, compilers, etc.**
- 3. Computer Organization: CPU, ALU, Storage devices - secondary and primary devices study I/O devices - keyboard, mouse, touch screen, scanners, printers, terminals, VDU.**
- 4. Operating System : System software and application software, programs - booting loader, diagnostic tests, BIOS; utility programs, functions of OS, types of OS, batch system, interactive system, multiprogramming, multitasking, multi processing, multi user. Client server concept.**
- 5. Introduction to DOS - DOS Internal and External commands, windows Operating System.**
- 6. File system : Introduction, types of files, data access and operations on files.**
- 7. Networking Principles and Technologies: Network concepts, LAN, WAN, MAN. Network topology, transmission media.**
- 8. Introduction to Internet - Concepts, advantages and disadvantages of Internet, problems of internet, email, chatting, browsing, browsers, surfing techniques, and introduction to standard browser etc.**

Suggested Readings :

1. **Computer Fundamentals** - **By V. Rajaraman**
2. **Fundamentals of Computer** - **By P. K. Sinha**
3. **Computers Today** - **By Sanders**
4. **Computer Studies** - **By C. S. French**

Course Code : 102

Course Name : OFFICE AUTOMATION

Objectives :

To gain hands on experience in office automation.

- 1. Introduction : Computer setup in the lab - machine, network, login, operating system - DOS, Windows, Software's - explanation of DOS commands (Dir, ed, md, rd, copy, del, move, rename, date, time ver, type etc.) network commands (dir, del mail, password etc.).**
 - 2. Unix Commands : Introduction to Unix O.S. commands ls with options, man, cp, mv, rd, pwd, passwd, mail, more diff, grep etc.**
 - 3. DOS Batch programming : Installation, attaching peripherals. Hard disk, floppy disk, formatting floppy disk, hard disk use of disk manager (partitioning), installation DOS and other software's.**
 - 4. Windows O.S. - Difference between DOS and Windows, Windows 95, w2k, Window Explores, Recyclebin, Desktop properties and control panel etc.**
 - 5. Creating bitmaps using paintbrush, use of clipboard, creating presentation using PowerPoint, importing pictures, text etc.**
 - 6. Windows based editors - notepad, word pad and its utilities and applications.**
 - 7. MS - WORD - Creating letter, table, fonts, page layout, document Formatting, spell check, print preview, template, mail merge and its applications.**
 - 8. Spreadsheet MS-EXCEL - Introduction, sorting, queries, graph, macros, statistical functions.**
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Course Code : 103

Course Name : MANAGERIAL ECONOMICS

Objectives :

To acquaint students with principles of economics as applied in the managerial decision making process.

Course Contents :

1. **Concepts and Techniques - Nature of business decision-making, Marginal analysis, optimization.**
2. **Theory of Demand and Supply - Demand and supply functions, Income and substitution effects: Revealed preference approach; demand forecasts; concept and application elasticity of demand.**
3. **Production and Cost - Returns to scale, Cost curves, Break-even analysis.**
4. **Theory of Firm - Profit maximization, Sales maximization, Ownership and control.**
5. **Market Structure - Competition, monopoly, oligopoly, Non-price competition. Macro Economics Aggregates and Concepts - GNP and GDP - Aggregate consumption - Gross domestic savings - Gross domestic capital formation - determinates of National Income.**
6. **Problems of Macro Economy - WPI, CIP and inflation - Unemployment - Balance of Payments. Economic Policy - Monetary and Fiscal Policy; synthesis of monetary and real factors.**

Suggested Readings :

1. **Adhikary, M. business Economics, New Delhi, Excel Books, 2000.**
2. **Baumol, W. J. Economic Theory and Operations Analysis, 3rd ed., New Delhi, Prentice Hall Inc., 1996.**
3. **Chopra, O. P. Managerial Economics, New Delhi, Tata McGraw Hill, 1985.**
4. **Keat, Paul G. and Philips K. Y. Young, Managerial Economics, Prentice Hall, New Jersey, 1996.**
5. **Koutsoyiannis, A. Modern Micro Economics, New York, Macmillan, 1991.**

Course Code : 104

Course Name : ORGANIZATIONAL BEHAVIOUR

Objectives :

To understand the implication of individual group and organization processes on individual behaviour in a work setting.

1. Course Contents :
2. **Introduction to OB : Emergence and importance of OB, Characteristics of OB, Organizational challenges and OB.**
3. **Individual Process in Organization : Personality, Nature of personality, Attitudes, perception and attribution, Learning, Different views of learning.**
4. **Motivation : Content and process theories, decision making and creativity.**
5. **Foundation of Group behaviour - Stage of group development; Group structure, Teams v/s group, Types of teams, creating high performance teams.**
6. **Leadership - Styles of leadership, introduction to trait, behavioural and contingency theories of leadership, charismatic leadership theory, transactional v/s transformational leadership, leading through empowerment.**
7. **Conflict - Transition in conflict thought, interpersonal and organizational conflict.**
8. **Organizational Structure and design - Basics of organizing, organizational design, organization strategy, determinants of organization design, organization design and employee behaviour.**
9. **Technology at Work Place - Work design, Organizational culture, Learning organization.**

Suggested Readings :

1. **Fred Luthans - By Organizational Behaviour.**
 2. **Robbins - By Organizational Behaviour.**
 3. **Keith Devis - By Organizational Behaviour.**
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Course Code : 105

Course Name : MANAGERIAL SKILLS DEVELOPMENT

Objectives :

To help the students to handle situations and problems most likely to be encounter by him/ her as a professional manager, either by acquiring new skills or improving existing once, as necessary.

Course Contents :

- 1. Communication Skills : Basics of communication - Learning to listening - Asking questions - Reading efficiently - Talking notes - Exchanging information - Making contacts - using telephone - information technology. Written Communication : Letters - Reports - One to one communication - Communicating for results - Assessing communication skills.**
- 2. Managing Meetings : Need for meeting - Aims - Choosing right type - Preparing for meeting - Attending meeting - Active participation - Minutes - Chairing a meeting - Keeping order - Solving problems.**
- 3. Managing Time : Analyzing time and use of time - Goals and priorities - Using time planners - Working with others - Scheduling time offs - Managing the time of others.**
- 4. Presentation Skills : Preparing a presentation - Use of audio-visual aids - Rehearsing - Analyzing and enhancing appearance - Body language - Improving voice - Eliminating tension - Delivering a presentation - Handling audience.**
- 5. Negotiation Skills : Defining and preparing for negotiations - Principles of exchange - Assessing positions - Using agenda - Creating right atmosphere - Conducting negotiations - Making a proposal - Responding - Weakening other party's proposition - Closing negotiation - Handling breakdown - Using mediator, arbitrator.**
- 6. Interviewing People : Curriculum Vitae - Technique - Preparing questions for interview - Conducting interview - Reading body language - Using tests - Analyzing interview - Recording impressions - Assessing abilities.**
- 7. Minimizing Stress : Stress management - Analyzing clauses of stress - Coping with daily life - Dealing with stress at work - Taking positive actions - Learning to relax - Developing interests Diet and fitness - Yoga and exercise.**

- 8. Emotional Intelligence :**
- 9. Concept of emotion, Emotional intelligence, Nature of emotional intelligence, applying emotional intelligence.**
- 10. Managing teams - concept of team, teams and groups, team building.**
- 11. Essential personal habits for effective managers - Brief aspects.**

Suggested Readings :

Bowman, Joel P. and Branchaw, Bernadie P. "Business Communication : From Process to Product". 1987. Dryden Press, Chicago.

Robert Heller and Tim Handle, Managers Manual, D.K.

Murphy, Herta A. and Peck, Charries E. "Effective Business Communications." 2nd ed. 1976. Tata McGraw Hill, New Delhi.

Pearce, C. Glenn etc. "Business Communications : Principles and Applications", 2nd ed. 1988, John Wiley, New York.

Treeces, Maira, "Successful Business Communications," 3rd ed. 1987. Allyn and Bacon, Boston.

"Managing Company - Wide Communication" - Werner David.

Victor David A. International Business Communication - New York : Harper Collins, 1992.

Emotional Intelligence by Daniel Goleman.

7 habits for highly effective people - By Stephen R. Covey.

Course Code : 201

Course Name : INTERNET PROGRAMMING FOR BUSINESS APPLICATION

Objectives :

The Students are provided with detailed understanding of various scripting languages. HTML, DHTML, Java script, VB script, XML, PERL are taught for designing Web based business applications.

Course Contents :

- 1. HTML : Introduction, simple HTML programs, links and addressing, Images, HTML and other media, layout, style sheets, frames, forms, web publishing.**
 - 2. Java script - Identifiers, Operators, Controlling, Web browser object model, window objects, pre-defined functions and event handling.**
 - 3. VB script - Identifiers, operators, controlling, web browser object model, window objects, pre-defined functions and event handling.**
 - 4. XML : Introduction, components of XML, document type definition, cascaded style sheets.**
 - 5. Extensible style language, schemas and namespaces, document object model, channel definition format, connectivity of JAVA - XML and**
 - 6. Database - concepts, advantages and dis-advantages, applications, VB-XML and database.**
 - 7. Introduction to DHTML and other scripting languages.**
 - 8. Introduction to ASP.**
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Course Code : 202

Course Name : PROGRAMMING WITH C++

Objectives :

The students are provided detailed understanding of Programming language with C++ and skills to design and develop business applications.

Course Contents :

- 1. Introduction : Difference between C and C++. The object oriented approach, object-oriented methodologies in analysis, design and in programming characteristics of object-oriented languages - Classes, Objects, Encapsulation, inheritance, Polymorphism C++ and C.**
- 2. Structures : An introduction, structure features, structures within structures enumerated data types.**
- 3. Functions : Simple functions, Passing Arguments to functions, returning values from functions, reference arguments, overloaded functions, address of an overloaded function, passing an address of an overloaded function as an argument to another function, inline functions, default arguments, variables and storage classes.**
- 4. Objects and Classes : A simple class, difference between class, structure and union in C++, C++ objects, constructors and destructors, concept of an ADT, constant member function, objects as function arguments, returning objects from functions, classes, objects and memory, static class data.**
- 5. Operator Overloading : Introduction, overloading, unary and binary operators, concatenating strings, comparison operators, arithmetic assignments operators, data conversion-between basic types, between objects and basic types.**
- 6. Inheritance : Derived class and base class, derived class constructors, class hierarchies, public and private inheritance, multiple inheritances, containership - classes within classes, inheritance and program development.**
- 7. Pointers : The delta and new operator, pointers to object, an array of pointers to objects, pointers to pointers, debugging pointers. Difference between pointers and references.**
- 8. Virtual Functions and Other Subtleties : Virtual functions, pure virtual functions, friend functions, static functions, assignments and copy initialization,**

the copy constructor, the this pointer. Abstract classes. Introduction to templates, exception handling, function with templates and file handling in C++.

Suggested Readings :

Object-Oriented Programming in turbo C++ - By Robert Lafore

Using Turbo C++ - By Herbert Schildt

Teach yourself C+ - By A.L.Stevens

Programming with C++ - By E. Balgurswamy

Course Code : 203

Course Name : ANALYSIS AND DESIGN OF INFORMATION SYSTEMS

Objectives :

The students are provided with detailed knowledge of system concepts in general, fact findings tools, conventional methods for system development viz : flow charts, decision table and decision tree. It also emphasizes on requirement and structured analysis, system design, system implementation and user interface for commercial applications.

Course Contents :

- 1. Introduction to system concepts and the information system : Introduction to system characteristics, elements of system, types of system, categories of information system, SDLC, waterfall model, spiral model, prototyping model and 4GT, tools for system development, system analyst role, skill.**
- 2. Requirement and structured Analysis : SRS, activities in requirement determination, fact-finding techniques.**
- 3. Structured System Analysis : Decision concepts, Decision trees, Decision tables, Structured English and Pseudocode, Feasibility study, DFD, Data dictionary.**
- 4. System design : States of system design, Input/ Output design, Forms, File design, File design, Database design, Normalization, ERD, Role of DBA.**
- 5. System Implementation : Testing, Implementation, Maintenance, Hardware and software selection.**
- 6. Computer Aided System Tools : Role of tools, Categories of automated tools, case tools, explain working of any CASE tools with an example and reengineering.**
- 7. User - Interface Design : Interface, Design dialogue, Dialogue strategies, and Screen management.**
- 8. Report, Menu layout designing - Mode of interaction between the system and user.**

Suggested Readings :

- 1. System Analysis and Design - By Award**
- 2. System Analysis and Design - By Senn**
- 3. Software Engineering - By Pressman**
- 4. Introducing System Analysis and Design - By Lee**

Course Code : 204

Course Name : BUSINESS ACCOUNTING

Objectives :

To develop an insight into principles and techniques of accounting and utilization of financial and accounting information for planning, decision-making and control.

Course Contents :

- 1. Financial accounting - Introduction to accounting - Principles of accounting - Preparation of financial statements.**
- 2. Accounting for inventories, receivables and depreciation.**
- 3. Analysis of financial statement - Cash flow and fund flow statements - Ratio analysis.**
- 4. Management accounting : Introduction, cost concepts, job order, process and contract costing system, cost volume profit analysis.**
- 5. Activity based costing.**
- 6. Budgeting and budgeting control, standard costing and variance analysis.**
- 7. Recent developments in financial and management accounting.**
- 8. International accounting standards.**

Suggested Readings :

- 1. Anthony R.N. and Reece J.S. Accounting Principles, 6th ed., Homewood, Illinois, Richard D. Irwin, 1995.**
 - 2. Bhattacharya S.K. and Dearden J. Accounting for Management. Text and cases, New Delhi, Vikas, 1996.**
 - 3. Hingorani, N.L. Ramanathan, A. R. Management Accounting, 5th ed., New Delhi, Sultan Chand, 1992.**
 - 4. Horngren, Charies etc. Principles of Financial and Management Accounting, Englewood Cliffs, New Jersey, Prentice Hall Inc., 1994.**
 - 5. Needles, Belverd, etc. Financial and Managerial Accounting, Boston, Houghton Mifflin Company, 1994.**
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Course Code : 205

Course Name : DATA ANALYSIS FOR MANAGEMENT

Objectives :

To make students familiar with basic concepts of statistical techniques used for effective decision making in business.

Course Contents :

- 1. Data Management and Analysis : Applications of data management and analysis.**
- 2. Sources of Data : Primary and secondary sources, controlled experiments, observational studies, sample surveys, etc.**
- 3. Data Storage and Retrieval : Sorting and Filtering data, data retrieval methods, data mining, DBMS, data filters (using MS-Excel Auto filter) Summarization of data using various and techniques.**
- 4. Data summarization and representation : Representation of data using Graphs and Charts; Bar diagrams, pie charts Frequency curve, histogram, frequency polygon and ogive curves.**
- 5. Data Analysis : Descriptive statistics : Measures of central tendency and dispersion, skewness and kurtosis.**
- 6. Forecasting techniques : Time series analysis, Correlation and regression analysis.**
- 7. Probability theory and standard distributions : Elementary probability theory, basic concepts and terms, Bayers' theorem Binomial, Poisson and Normal distributions.**

Suggested Readings :

A Microsoft Excel - Companion for Business Statistics - By David L. Eldredge (THOMSON)

Statistics - By S. C. Gupta.

Course Code : 301

Course Name : E-BUSINESS AND CYBER LAWS

Objectives :

The students are provided with knowledge of e-commerce and e-business and made awareness of various laws regulating these sectors and all issues incidental to the same.

Course Contents :

- 1. Introduction : meaning of a e-commerce, Business issues in e-commerce, Technology issues, commerce value chain, its components, marketing on the internet. The legal environment.**
- 2. Internet business strategy : Commerce and Technology revolutions. The internet value proposition, New competitive threats, and business models - case study.**
- 3. Functional architecture : core architectural ideas, Roles, Components, planning and implementation, Outsourcing, Role of ISPs, Commerce service providers, Project management, Role of standards, Security design.**
- 4. Building blocks of e-commerce : components, content transport, Server components, Programming clients, Sessions and cookies, object technology, commerce client technology, security - concerns, Analyzing risk, Basic computer security, Internet security, Client and server security issues, Achieving application security.**
- 5. IT Act, 2000 - History of IT Act 2000, Digital Signatures, Electronic Governance, Certifying Authorities.**
- 6. IT Act, 2000 and Intellectual Property Law - Patents, Trade Marks, Domain Names, ICANN, UDRP - Uniform Domain name and dispute resolution policy, Cyber Piracy.**
- 7. IT Act, 2000 and E-Contracts - Indian Contract Act, Sale of Goods Act, Forums to decide E-commerce or Cyber contract disputes.**
- 8. IT Act 2000 and Cyber Crimes - Unauthorized Access and Modification Offence, Data Related theft and interception, Network instruction and Sabotage, Hacking and virus distribution, Frauds, Forgery, Obscenity - Cyber Sex, Pornography. Defamation or distressing content (Cyber smearing). Cyber talking, Case Laws'.**
- 9. TRAI Act 1997-Overview, 2000 Amendment.**

Suggested Readings :

- 1. Indian Laws of E-Business - By Rajesh Talwar**
 - 2. Handbook of Cyber Laws - By V. Sharma**
 - 3. IT Law - By Ian Lloyd**
 - 4. Introduction to Computer Law - By David Bainbridge**
 - 5. Designing systems for Internet Commerce - By Treese, Stewart, Addison Wesley.**
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Course Code : 302

Course Name : DATABASE MANAGEMENT WITH ORACLE

Objectives : The Students are provided detailed basic concepts of DBMS and RDBMS and SQL and skills to make use of business applications through ORACLE.

- 1. Introduction to oracle RDBMS : Cod's rules, database, tables, columns and keys, organizing data in oracle.**
- 2. Oracle tools : concepts of SQL *Plus, SQL Form, SQL Reports, Pro compiler, PL/SQL, data types, SQL - DML Commands - Select, Insert, Update, Delete - Retrieving data, summarizing data, adding data to the database, updating data to the database and deleting data. Simple Queries - use of Where clause, arithmetic, comparisons and logical operators, ORDER BY, GROUP BY and group functions, multi table queries, sub queries, data base objects - views and index, sequences, synonyms. Create, Alter, Drop integrity constraints, Transaction Processing and control - Commit, Roll back, save point, locking of tables. Data Control - grant and revoke, Report Writing through SQL.**
- 3. PL/SQL : Components of PL/SQL Programme, data types, assignment, logical and arithmetic operators, comment characters, Conditional statements - if, if else, if else if, iterations - loop, while and for loops. Dynamic data types - %type, %rowtype. Cursor management - Implicit and explicit cursor, cursor attributes, parameters through cursor, Error handling - System defined and user define exceptions. Procedure, functions and triggers with examples and exercise.**
- 4. ORACLE FORMS module : Application development using Forms 5. Organizing Forms, list of items, painting canvas, default form process, simple and master detail forms, procedure, trigger and their types, procedure and trigger syntax and execution of forms. Visual attributes, LOV - based on query and static LOV. Report Module - Introduction to report writing, Types of Reports, formulizing the reports, report layouts, calculated fields, group settings modifying, Text setting, previewing a report, running report. Graphics module - designing graphics - integrating graphics with forms and reports.**

Suggested Books :

- 1. Bayross, Ivan Commercial applications Development Using Oracle Developer 2000, BPB Publication.**
 - 2. Muller, Robert J. Oracle Developer 2000 Hand book, Oracle Press.**
 - 3. The SQL and PL/SQL programming by Ivan Bay Ross.**
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Course Code : 303

Course Name : VISUAL PROGRAMMING AND MULTIMEDIA MANAGEMENT

Objectives : The aims of the course is to acquaint the students with the knowledge of Graphical user interface and Visual Basic to develop business applications and Applications of multimedia in business applications.

Visual Programming

1. Introduction to Visual Basic :

Even Driven programming starting and exiting VB, Understanding VB Environment, Project Explorer, Properties window, Toll Box, Form Layout Window, Property Pages Getting Help, Saving Project, Printing Projects, Running Applications.

2. Adding Code and events :

Code Window, Naming Conventions Variables (All Data types) ; byte, Boolean, integer, Long (Long integer), Single, double, Currency, Decimal, Date, Object, String, String (fixed length), Variant, Variant (characters), user-defined, Scope (Global, Local, Static), Constants.

3. Visual basic Controls : Label, and Textbox Controls, Command Button Control, Frame, Checkbox and Option Button Controls, List box and Combo Box Controls, Drive list Box, Directory List Box and File List Box, Controls, Formatting controls, Control Arrays, Tab Order and timer.

4. Working with Functions : Functions - String Functions, Numeric, Statistical and other business related functions.

5. Control Statements - IF and IIF statements, Select Case Statement, Do Statement, For Statement, Exit Statement.

6. Dialog Boxes - Msbox, input box, common dialog Box with various icons used in Msbox.

7. Menues - Creating Menus, Adding to menus, Toolbars, other common controls (MS Windows Common controls 6.0, MS Common controls - 3, 6.0).

8. Accessing Data - Reading and files, Data Form Wizard, Data Control, Data Grid Control, DB - Combo Box and DB-List Box, SQL Queries in VB, jet Dan, ADO (With control and code), Error handling.

9. Objects and Classes - OLE Control Programming with objects (User define class and using them on the form).

10. Report Writing : Using Crystal Report Tool/ Data Report tool.

Course Code : 304

Course Name : MARKETING MANAGEMENT AND RESEARCH

Objectives :

To highlight the application of fundamental marketing concepts and to reinforce 'marketing as an organic business.'

Course Contents :

- 1. Marketing environment in India : Market concept and its types - Government market Industrial v/s consumer market. High-tech marketing, Green marketing, Internet, website and e-marketing-Emerging trends. Global market-Multinationals - Roles and problems.**
- 2. Marketing functions and origination : Concepts of marketing - Marketing approaches Marketing process - Modern concept of marketing - Consumer delight its structure - Career options - Duties and responsibilities at different levels.**
- 3. Marketing research : Introduction, scope - Marketing research process - Report format - Sampling techniques - Research techniques - Survey method, questionnaire method.**
- 4. Marketing planning : Process - Its contents - Marketing strategy - Process and contents - PLC, Market segmentation and product positioning - Competitive strategies.**
- 5. Marketing mix (P's of marketing) - Strategies for 4 P's, New product development, promotion mix, pricing methods and applicability, distribution strategy and channel decisions.**
- 6. Marketing control : Process, Types of marketing control - Marketing audit, marketing ratios - Marketing budget.**
- 7. Consumerism : Marketing ethics.**
- 8. Case studies.**

Suggested Readings:

- 1. Marketing Management : New Millennium - Philip Kotler**
- 2. Fundamental of Marketing: Station.**
- 3. Marketing Management: Dholakia.**
- 4. Marketing Research: Sangeeta Agarwal.**
- 5. Managing Brand Equity - David Aker**

- 6. Brand Extension : The Good, Bd and Ugly - David Akar**
- 7. Quelch, John, A. Marketing Management: Text and Cases / John A Quelch, R. J. Dolan and Thomas J. Kosnick - Boston: Irwin / McGraw Hill, 1999 ISBN : 0-256-10955-9.**
- 8. Magazines : 1. HBR 2. A & M 3. Market log Business Novels : 1 Strong Medicine
2. The Middleman Must Add Value.**

Course Code : 305

Course Name : HUMAN RESOURCE MANAGEMENT

Objectives : The Purpose of this course is to facilitate an understanding of the concepts, methods and strategies for HRD.

- 1. Human Resource Management : Concept, Scope and Significance of Human Resource Management, Human Resource Planning, Formulation of Human Resources. Policy. H.R.D. Mechanism. Performance Appraisal. Potential Appraisal, Career Development.**
- 2. Strategies for H.R.D. : Individual Learning. Group Learning. Organizational Development. Transactional Analysis. Behavioural Modeling. Development Programmes. Training Methods. Organizational Support for H.R.D. : Organizational Involvement. Implementation Evaluation of H.R.D. Future Trends in Industry in Relation to H.R.D.**
- 3. Personnel Management : Nature and Scope of Personnel Management. Manpower Planning. Career Development. Job Analysis, Job Description and Job Specifications. Recruitment and Selection. Induction and Placement. Welfare. Canteen. Organizational Discipline. Grievance Handling. Employee Morale and Motivation. Wage and Salary Administration. Health. Safety. Productivity. Incentives.**
- 4. Industrial Relations: Industrial Relations Environment. Labour Force. Trade Union Movement. Its History. Trade Union Rivalry. Trade Union Recognition. Role of Trade Unions. Recent Trends in Trade Union Movement and Leadership. Industrial Relations in the light of Economic Reforms. Issues Involving Revision of Labour Laws for Closures and Retrenchment. Nature and Causes of Industrial Disputes. Job Security. Economic Demands and Higher Cost of Living. Collective Bargaining. VRS. Unfair Labour Practices. Conciliation. Arbitration. Adjudication.**
- 5. Strikes, Lockouts and Go-Slow. Cost of Industrial Unrest. Efficiency of Laws concerning Industrial Relations in curbing Strikes. Role of Govt. in Industrial Relations. Workers Participation in Management.**
- 6. International labour Organization. Perceptions of Exit Policy. new Economic Environment. A Review of Industrial Relations and HRD scenario in the context of second generation economic reforms .**

Books Recommended :

- 1. Personnel Management – Monappa and Saiyaddain.**
 - 2. Industrial relations – Monappa**
 - 3. Personnel Management and Human Resources : Venkatraman and Srivastava**
 - 4. Human Resource Development : Silvera D.M.**
 - 5. Managing Human Resources : Cascio**
 - 6. Strategic Approaches to HRM – Y.R. K. Reddy.**
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Course Code : 401

Course Name : PROGRAMMING WITH JAVA

Objectives : The students are provided with knowledge of programming language with

Java and made awareness of various business applications through Java.

1. **Object Oriented programming – Basics overview of programming paradigms, features of OOPS – classes, Encapsulation, polymorphism, Inheritance.**
2. **Introduction to JAVA programming – Features, as programming language and platform, JDK environment.**
3. **Java – Programming fundamentals – structure of JAVA program, Data types, variable, operations, keywords, naming conventions, Flow control, - Decision, iteration arrays.**
4. **Classes and objects – Class – Members, Access control Objects, Constructors, Finalization.**
5. **Interface – Need and functions – Abstract classes, abstract Mtd.**
6. **Packages – Importing packages, java, long – string, string buffer, system, Math, Wrappers, jaa util – Random, Date, Vector, Hash Tahle.**
7. **Event programming – Java awt components, layout managers – Border, flow, grid, event, Model, Listeners/ Adapters.**
8. **Exception Handling – Exception and types, try ..., catch, finally, throw, custom exceptions.**
9. **Applet – Java applet – Applet, Applet context, applier life cycle.**
10. **java swing – Japplet, Icns and Labels, text fields, button, combo boxes, tabbed and scroll panes, trees, tables.**
11. **Threading – Threading basics, priorities, synchronization, inter thread communication and java doc.**

Suggested Books

1. **The complete reference JAVA 2 by Patric Naughton, Herbert Sachildt.**
 2. **The JAVA tutorial by Mary compione, kathy wirath**
 3. **Core Java 2 Vol. 1 and Vol. 2 – By Cay S, Horstomann, Gary cornell.**
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Course Code : 402

Course Name : COMPUTER NETWORKS AND NETWORKING

Objectives : The purpose of this course is to acquaint the students with the concept of networking, networking medium, networking architecture and networking devices and various topologies used for networks.

- 1. Introduction to Networks and Networking concepts : concept of Networking, networking fundamentals, needs of networking, local and wide area networks and their advantages and disadvantages. A Networking Lexicon: clients, peers and servers. The Network medium carriers, network protocols, network software, network services.**
- 2. Network Types : Peer-to-peer networking, server-based Networking, storage-area networking, Hybrid networks, hardware requirements, selecting the right type of network, Basics of communication networks, point-to-point and Multi-drop circuits, the telephone network, switched and non-switched options in communication, connection oriented and connectionless networks.**
- 3. Networking Medium - Network Cabling : (Tangible physical media) General cable characteristics, Base band and broadband transmission, the importance of bandwidth, Co-axial, Twisted-pair, Fiber-optic cable, UTP, Wireless networking : (Intangible Media), Types of wireless networks, wireless LAN application, Wireless LAN Transmission Wireless Extended LAN Technologies, Microwave networking technologies, high-speed wireless networking technologies.**
- 4. Network architecture**
 - a. OSI and 802 networking models, Role of reference model, OSI network reference model, IEEE 802 networking specifications.**
 - b. Ethernet; Overview of Ethernet, 10/100 Mbps IEEE standards, Gigabit Ethernet, Frame Types Ethernet, Segmentation Concept**
 - c. Token Ring; Token Ring fundamentals, hardware components, structure of token ring**
 - d. Apple talk and ARCnet**
 - e. FDDI**

- f. **Broadband Technologies, Broadcast technologies, ATM and SONET concepts**
5. **Networking devices:**
 - a. **Network Interface Card (NIC)**
Basic of NIC and its operation, Principles of NIC Configuration, Special purpose NIC Wireless adapters and Remote Boot adapters, Device Driver Software
 - b. **Equipment Perspective**
Repeater, Bridge, Router, Gateways, Protocol Specific Devices, Router Technology Multiplexer, Network Switches.
 6. **Network Communication and protocols**
 - a. **Classification of communications protocols polling/ Selection systems, stop and wait polling/ selection, continuous ARQ Non-polling systems, Request to send/ clear to Send, Xon/ XOff, TDMA, Peer to per non-priority systems**
 - b. **Function of packets in Network Communications**
Packet structure, packet creation, understanding packets
 - c. **Protocols**
Goals of Layered protocols, the function of protocols, hardware and software, protocols, character and bit protocols, HDLC, TCP/IP, Transport and network layer protocols, TCP/IP application level protocols.
 7. **Network Design Essentials**
 - a. **Network design**
 - b. **Designing a Network layout**
 - c. **Standard topologies**
 - d. **HUB's type**
 - e. **Variations of Major topologies, mesh, star-bus, star-ring and interconnecting multiplex virtual LANs**
 - f. **Selecting a topology**
 - g. **Constructing a network layout**
 8. **Simple Network Operations**
 - a. **Network operating systems overview**

- b. Software components of networking, NOS components, server software, client software**
- c. Installation of NOS, Installation preparation, installation of MS-Windows, Novell Netware, Red Hat Linux.**
- d. Network Services**
Installing, Removing and configuring network services, network binding, network printing, network directory shares.

9. Network administration and Support

- a. Managing network accounts**
- b. Managing network performance**
- c. Managing network data security**

10. Solving network problems
 - a. Preventing problems with network management and planning setting security policies, setting hardware and software standards, maintaining documentation, using network monitoring utilities
 - b. Network Troubleshooting methodology and situations
Cabling and related components, pore fluctuations, upgrades, poor network performance, network operations problems, problems in a multi-vendor environment problems with network account and applications, problems with network communication
 - c. Maintenance of Networks
11. Complex, Enterprise and Distributed Networks
 - a. Centralized Vs Client/ Server computing, client/ server, Model in a database environment, client/ server architecture, advantages.
 - b. Modem in network communications, remote access networking (serial line internet protocol (SLEP) point-to-point protocol (PPP)
 - c. Understanding and using internet.
 - d. Locating internet resources, making an internet connections,
 - e. Internet security
 - f. Intranet concepts
 - g. Internetworking, switching network frame relay packet switching, message switching, circuit switch up.
 - h. ISDN, ATM, ATM versus other Technologies and services.

Suggested Books:

Computer networks by Uyles Black

Computer communication and networking technologies by Michael A Gallop and William Hancock

Networking Essential, BPB Publication

Introduction to networking by Barry Nance, PHI publication.

Networking Essential, by Ed Title and David Johnson Thomson learning.

Computer Networks : Andrew S. Tanenbaum

Data & Computer Communication William Stallings.

Course Code : 403

Course Name : DATA WAREHOUSING AND DATA MINING

Objectives :

- 1. Introduction to Data Mining – need for data mining its importance association analysis. classification of data mining – analysis, classification and prediction, cluster analysis, outlier.**
- 2. Data warehouse and Olap Technology**
Data warehouse difference between operational database data warehouse multimedia data model.scheman for multidimensional database measure OLAP operations data warehouse architecture implementation.
- 3. Data preprocessing :**
Need of preprocessing, data clearing, data integration, transformation and data reduction.
- 4. Data mining primitives, data mining query languages and syntaxes.**
- 5. Concept description, data generalization and summarization – Based characterization. Analytical characterization mining class comparisons.**
- 6. Introduction to association rule mining, classification predictions issues regarding classification and prediction cluster analysis.**
- 7. Data mining applications**
Financial data analysis, retail industry, telecommunication, health etc.

Suggested Books :

- 1. Data Mining - Concepts and techniques**
Jiawei Han
Micheline Kamber
 - 2. Data Mining - Techniques Arun Pujari.**
-

Course Code : 404

Course Name : FINANCIAL MANAGEMENT AND CONTROL

Objectives : The Purpose of this course is to acquaint the students with the broad framework of financial decision making in a business unit

- 1. Financial Management: Aims and Objectives of Financial Management.**
- 2. Financial Analysis: Analysis of Financial Statements: Changes in Financial Position, Funds-Flow and Cash-Flow Analysis, Ratio Analysis. Cost-Volume-Profit Analysis.**
- 3. Cost of capital and capital structure: Operating and financial leverage; Investment and capital structure decisions; Instruments of Long Term Finance; Cost of different sources of raising capital; weighted average cost of capital; Optimum capital structure.**
- 4. Capital expenditure decisions: Valuation and rates of return; Methods of capital budgeting.**
- 5. Short-term financing: Management of working capital-cash, receivables and inventory management.**
- 6. Dividend decisions: Internal financing and dividend policy.**

Suggested Books :

Financial Management : S. C. Kuchal

Financial Management : S. M. Inamdar

Financial Management : Khan and Jain

Financial Management : I. M. Pnadey

Financial Management : Theory and Practice : Prasanna Chandra.

Course Code : 405

Course Name : KNOWLEDGE MANAGEMENT

Objectives :

- 1. Concept of data, information, types of information, features of quality information. Evaluation of information system. Components, structure of information, levels of information system, traditional types of information system; TPS, MIS, EIS/SIS, modern information system – DSS, ES, Office Automation.**
- 2. Knowledge Management – Definition, evaluation of knowledge management, challenges of KM, KM Organization, benefits of KM, reasons for implementation of KM, Key attributes of knowledge, 8 C's successful KM, KM drives, KM Myths.**
- 3. Knowledge – Concept, knowledge, intelligence, experience, common sense, types of knowledge, human thinking and learning.**
- 4. KM Life Cycle- Challenges in building KM system's difference between SDLC and KMSL, users Vs knowledge workers, phases of KMSLC – evaluate existing infrastructure, form the KM team, knowledge capture, design of KM, blue print, verify and validate the KM system, implementation KM system, manage change and rewards structures, post system evaluation, roll of the knowledge developers in each phase.**
- 5. Knowledge creation, nanaka's model of knowledge creation and transformation, knowledge architecture, identifying knowledge centres, technical core – The user interface layers technical layers of the KM.**
- 6. Capturing Tacit knowledge – Concept, evaluating the experts – level of expertise, capturing single and multiple experts, advantages and drawbacks of using single experts and multiple experts. Developing a relationship with experts, Fuzzy reasoning and the quality of knowledge capture, the interview, guide to successful interview, benefits and drawbacks of interview. Other knowledge captures – on site observations, Brainstorming – Electronic Brainstorming, protocol analysis, concept of Scenario, Protocol procedure of the diabetic foot KM system, Nominal Group Technique (NGT). The Delphi method concept mapping procedure semantic nets, Black boarding.**

- 7. Knowledge codification – Concept of codifying – Diagnosis, instruction, interpretation planning and scheduling, prediction, role of planning, models of knowledge conversion steps to codify knowledge, codification tools and procedures. The knowledge developer skill set.**
- 8. System testing and deployment – Quality and quality assurance, knowledge testing approaches to logical testing, user acceptance testing, Managing testing phases, KM system deployment, issue related to deployment and user training and deployment, review of post implementation.**

Suggested Books :

- 1. Knowledge Management - By Elias M. Awad and Hassan M. Ghaziri Pearson Education.**
 - 2. Leadign with Knowledge – Knowledge management practices in global InfoTech companies. By – Madanmohan Rao, Tata McGraw-Hill.**
 - 3. Knowledge Mgt. Field Book – By Bukowitz W.R. and William R.L.**
 - 4. Knowledge Mgt. Strategies – By Honeycut, Prentice Hall of India.**
 - 5. Knowledge Management System – By Barnes S, (Theory and Practice) Thomas Learning Publication.**
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Course : 406

Course Title : TRAINING PROJECT

A student shall be required to undergo training in the Organization for a period of 50 days during Vacation (after completion of Semester III external examinations during the Second year of the degree programme)

The organization, where student intends to join will be (i) Joint Stock Co. (either public or private) or Government Co. (ii) Registered Partnership or Official Franchise (iii) Central or State Government Department or Agency including Defense Organization (iv) Non-Government Organization or Non-Profit Societies. Associations or Bodies incorporated under law of the land.

The objectives of the training project are (a) to expose the students to the organizational work culture (b) to obtain knowledge and understanding of technical and operational aspects of the organization.

A guideline for conduct of the training project will be provided by the academic centre. Students have to strictly follow the guidelines.

A student shall be required to submit a Certificate from the Organization about the

satisfactory completion of the training. A presentation and viva based on student's

Training Project will be held in during the Semester IV examination.

The Training Project report will be evaluated for 100 marks.

Course No. : 501

Course Time :PROJECT MANAGEMENT

Objectives : TO UNDERSTAND THE FRAMEWORK FOR PREPARING AND EVALUATION PROPOSALS AND TO LEARN TOOLS AND TO LEARN TOLLS AND TECHNIQUES OF PROJECT MANAGEMENT.

Course contents:

1. Project management: concept and scope; types of projects; Generation and screening of project idea; importance and difficulties in project planning.
2. **Project risk management: Risk planning cycle; Technology platforms in risk management Risk modeling and simulation.**
3. **Establishing the project: Feasibility studies: Technical studies: Financial analysis – tools and techniques.**
4. **Social cost-benefit analysis: project profitability: Economic viability- Methods of assessment.**
5. **Project organization: Project management team; Contacts-Planning, tendering, evaluation: legal aspects of contact management’ Global tendering.**
6. **Project network PERT evolution, techniques; Monitoring and control of projects –Projects evolution.**
7. **Software project management: Activities covered; Activity planning; ISO certification; Specialised bodies.**
8. **Case studies in project management.**

Suggested reading:

1. **Chaudhary S: Project Mangement- Tata McGraw hill**
 2. **Gopalkrishna P. Rammoorthi: Text books of project Management Mc Millan.**
 3. **Nair N.G.: Rosuerce Mangement- Vikas**
 4. **Hughes B. Cotterell Mike Software Project Mangement –Tata Mc Graw hill.**
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Course Code : 502

Course Name : INNOVATION AND TECHNOLOGY MANAGEMENT

Objectives : To Make the students able to participate in planning and implementation Innovations of advanced enterprise-wide systems and technologies in their career.

- 1. Enterprise Resource Planning (ERP) : Evolution of ERP-MRP and MRP II - Problems of system island need for integration and interface-early ERP packages-ERP products and Markers-opportunities and problems in ERP selection and implementation; ERP implementation: Identifying ERP benefits team formation-Consultant intervention-Selection ERP-Process of ERP implementation-Managing changes in IT organization-Preparing IT infrastructure-Measuring benefits of ERP- Integrating with other systems; Post ERP, Modules in EROP; Business Modules of ERP Packaging; Reengineering Concepts; The emergence of reengineering concept- Concept of Business process – rethinking of processes – Identification of re-engineering need – preparing for re-engineering-implementing change-change management- BPR &RP.**
- 2. Supply chain management (SCM) : The concept of value chain differentiation between ERP and SCM – SCM for customer focus-need and specificity of SCM-SCM scenario in Indian products and markets of Semi-issues in selection and implementation of SCM solution – CRM solutions.**
- 3. E-Business (E-Biz); Introduction to – Net technologies – Evolution of E-Commerce, EDI and E-Business – business opportunities-basic and advanced business models on internet banking and related technologies – security and privacy issues – technologies for E-Business, future and growth of E-business. (14).**
- 4. TECHNOLOGY ACQUISITION AND DIFFUSION – Technological Indicators: Make Vs Buy Decision; Techno market Survey; Assessment and Evaluation of Technology (TA and TE), Methodology of TA; TA imperatives; Organization and Management of TA; TE parameters ; Financing the Technology; Government Funding; CSIR, IDBI, ICICI, CII and UNDP, etc; Venture capital; Identification of core competence; technology absorption; and diffusion; terminology and concepts; Constraints**

in Technology Absorption; Technology Absorption Efforts- Case studies DRDO; management of Technology Absorption; Benefits of Technology absorption; future thrust for Technology absorption; Importance of diffusion; diffusion strategies; case studies Indian Experiences; Technology Marketing Issues, Strategies – Internal transfers, export etc.

- 5. TECHNOLOGY FORECASTING – Exploratory Methods of TF; Delphi Techniques; Cross Impact Matrix; Curve Fitting; Morphological Methods. Trend Extrapolation; Regression Analysis; Econometric Models; Normative Methods of TF; OR Models and Simulation; Networks Techniques; Relevance Trees; system dynamics; quantitative methods; Futurology; Activities of TIFAC – Case Studies.**

Suggested Books:

- 1. Hawthorne, Edward P: management of Technology; London, McGraw-Hill, 1978.**
 - 2. Frames, am, Martin and Kenneth King: Technological capabilities in the third world, Macmillan, 1984.**
 - 3. Jain Ashok. S. Pruthi, K.C. Garg S. Anabi; Indicators of Indian Science and Technology, Segments Books Publication, 996.**
 - 4. Twiss, Brain and Goodridge, Managing Technology for Competitive Advantage, Pitman, 1989.**
 - 5. Ayers, Robert U : Technological forecasting and long range planning**
 - 6. Bowonder, B and Miyake. T., 1990 Technology Forecasting: Methodologies and case studies.**
 - 7. Bright, James R. Scoeman, Milton, E. F. 1973, A Guide to Practical Technological Forecasting: Prentice Hall.**
 - 8. Jones H. and Twiss B.C. 1979 Forecasting Technology for planning decision, Mac Millan, London;**
 - 9. Hammer, Micheal and Jamts Chamby Reengineering the corporation, 1997. 2. Leon, Alexix Countdown 2000, Tata McGraw.**
 - 10. Ptak, Carol A. and Eli Scharagenheim ERP, St Lucie Press, NY, 2000.**
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Course Code : 503

Course Name : IT ENABLE SERVICES

Objectives :

- 1. Business Process outsourcing: Introduction, issues in BPO – reasons, capabilities required. Overview of BPO – finance and accounts, human resources, transaction processing, supply chain management, CRM.**
 - 2. Challenges in BPO – disaster management, marketing strategy, critical success factors, vendor evaluation and selection process, commercial terms, transition planning and program management.**
 - 3. Industry sector analysis: banking and financial services, health care, manufacturing, case study.**
 - 4. BPO: Delivery Model – Business requirement, Technical specification, Operational Expertise, Process Expertise and Pricing.**
 - 5. Case Studies: Credit Card Operations, Engineering Design and Development HR functions – New Trends in HR, Functional Services, CRM and Accounts Services.**
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Course Code : 504

Course Name : INFORMATION SYSTEMS AUDIT

Objectives :

- 1. Security management practices – Security management responsibilities, security principles, difference between administrative, technical and physical controls, risk management and risk analysis, data classification, security roles, personnel security issues, organizational issues, DA and DBA role.**
- 2. Security Trends: Areas falling under security umbrella, information warfare, security exploits, layered approach to security, policies affecting security.**
- 3. Access controls – Principles, identification methods, Biometrics, authentication methods, types of access control, possible threats to access control practices, monitoring and auditing practices.**
- 4. Physical and environmentally securities, risks, threats and measures.**
- 5. Telecommunication and networking security.**
- 6. Cryptography, public-private key, hashing algorithms and uses types of attacks on cryptosystems.**
- 7. Disaster recovery and business continuity planning backups, Hot site, warm site.**
- 8. Law, investigation and ethics.**

Suggested Books

- 1. Text for CISSP examination.**
 - 2. EDP auditing – Ron Weber**
 - 3. CISA Review material**
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Course Code : 505

Course Name : MANAGEMENT SCIENCE AND DECISION TECHNOLOGIES

Objectives :

To market students familiar with basics of management science and quantitative techniques used for decision making.

Course Contents:

- 1. Overview of management - Evolution of management though - Scientific management school - Organization development school - Human relation school - Behavioral science school.**
- 2. Management Science Approach - Historical perspective of operation research - Methodology - Decision process, Management science techniques.**
- 3. Introduction to LPP - Applications and formations of LPP.**
- 4. Transportation and assignment problem.**
- 5. Decision theory - Decision and risk analysis.**
- 6. Queuing theory.**
- 7. Simulation.**
- 8. Networking Analysis - CPM and Pert.**

Suggested Readings:

- 1. K.V. Rao - Management Science - McGraw Hill Book Company, Singapore.**
 - 2. Gupta, S. P. and Gupta M. P. Business Statistics, New Delhi, Sultan Chand, 1997.**
 - 3. Narag, A. S. Linear Programming and Decision Making, New Delhi, Sultan Chand, 1995.**
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Course Code : 601

Course Name : ADVANCED INTERNET PROGRAMMING

Part – I

- 1. Introduction to Net Technology – concept of net, not initiative and framework, components of NET, common language Runtime (CLR) and services offered by CLR, Common Languages specification, Language compilers support CLS, intermediate language code, JIT compiler and its benefits, components in NET, Assemblers and deployment, Manifest, metadata and extending metadata, Global Assemble Cache, Namespaces.**
- 2. VB.NET – Differences in VB 6.0 and VB.NET, VB.NET Language, Introduction to Object Oriented in VB.NET, Exception handling, ADO.NET, Events and delegates, Introduction to Multithreading, Use of Attributes.**
- 3. Developing web applications in ASP.NET – Introduction to web applications using ASP.NET, comparison with ASP, Web application components and configuration including web config and global aspx, Introduction to Web Forms, Page directives, code behind pages and programming includes error handling, event handling, page redirection, state management – Server side (View State, Application and Session state), Web Controls: HTML controls and ASP.NET server controls, validation using validation controls, Using Net components on web forms, data access on web form using data reader, inserting and updating data from web forms, introduction to ASP.NET web services, writing ASP.NET web service consumer, ASP.NET pages caching, Partial page caching using User controls, composite controls.**

Part-II

- 1. Java I/O, Java.io packages, Byte/Character Streams, Reader/ Writer, buffered streams, buffered reader/writer, filtered streams, file reader/writer, file streams-sequential/ random, print writer, examples life handling, IO streams etc.**
- 2. Networking with Java package, networking basics ip address, url, protocols etc. Inet Address, URL, Sever sockets, sockets, datagram socket, URL connection and other classes, examples online chatting, packages.**
- 3. JDBC API – Java database connectivity jdbc drivers, database access class, examples.**

4. **Java web server, web server basics, java web server functions, HTML forms/ pages, examples.**
5. **Java servlets, http java servlets, session management classes, servlet chaining and filtering, servlet life cycle, examples.**
6. **Java server pages, need for jsp, basics and tags, jsp deployment and invocation, jsp and beans, custom tags, examples.**

Suggested Books :

1. **Core Java 2 Vol – II** - By Horstemann Son Microsystem press.
 2. **Microsoft ASP.NET** - By Bhasin prentice hall publication
 3. **Professional ASP.NET 1.0** - By Andrewson and Francis, Shroff publication.
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Course No. : 602

Course Title : INTERNSHIP PROJECT

Internship Project

A student shall be required to undergo training in the Organization for a period of 4 months days after the end of the Vth Semester examination of the degree programme

- A) For students who have already been working**
For those students who have been placed and are working in different corporate Organizations, they should undertake Internship Project in a area of current issue which will enhance their academic worth and will serve the interest of the organization, where they are working. In consultation with the authorities of the organizations concerned. Internship Research projects can also be assigned to them by the organizations concerned.
- B) For students who are yet to be placed**
For those students who are yet to be placed, such students must undertake Internship projects on a Topic of current economic / social relevance. Such projects should take into account the present problems faced by the industry and the society and seek viable solution for the same.

The organization, where student intends to join for internship projects will be (i) Joint Stock Co. (either public or private) or Government Co. (ii) Registered Partnership or Official Franchise (iii) Central or State Government Department or Agency including Defense Organization (iv) Non-Government Organization or Non-Profit Societies. Associations or Bodies incorporated under law of the land.

This is expected to be project based learning exercise to be undertaken by the student under the guidance of allotted guide / Corporate Guide in the month of Jan after the completion of V Semester Examination.

A student shall be required to submit the Project Report based on the same in the month of April. A student will not be allowed to appear for the presentation and viva Examination for the same unless he / she completes his internship project study work to the entire satisfaction of the Faculty Guide and Academic Co-ordinator.

Evaluation of Internship Project

- 100 marks for Report**
 - 100 mark for presentation and Viva Voce examination based on the Report.**
-