2. Information Technology Group

OIT 301  System Analysis & Simulation
OIT 302  Information System Design & Implementation
OIT 303  RDBMS & SQL Concepts
OIT 304  Business Data Networks
OIT 305  Security & Control of Information System
VEER NARMAD SOUTH GUJARAT UNIVERSITY

MBA (Full Time)

Semester – III

INFORMATION TECHNOLOGY GROUP

OIT 301

System Analysis & Simulation

Course Contents:

1. ‘C’ Programming Language
2. Role of Modeling in System Analysis
3. Simulation of Stochastic Systems
4. Generation of Pseudo-Random Numbers and Stochastic Varieties using the computer
5. Simulation of Queuing Systems, using Special purpose Languages for Simulating Queuing Systems
6. Simulation of Inventory Systems
7. Simulation Software
8. Simulation of Manufacturing & Material Handling Systems
9. GPSS and/or SLAM
10. System Dynamics
11. Simulations of Systems with feedback, using DYNAMO in System as dynamics
12. Validation & Calibration of Simulation Model

Suggested Readings:

1. Kanetkar Y. : Let us C, BPB,
2. Kanetkar Y. : Understanding Pointers in C, BPB,
3. Gottefridt : Programming in C, Tata MacGrow Hill,
5. Holzner S., C Programming, PHI
7. Lewin Morton H., : Elements of C,
12. N. Deo : Simulation with Digital Computers, PHI
Course Contents:

3. CASE Tools
4. Software Design Alternatives
5. Basic Concepts and terminology related to files, Sequential, Indexed sequential, Random Files, their design and maintenance, Special File structures
6. Cases related to Design and Implementation DBTG Network Data Models
7. Issues related to Data Base Processing (Crash recovery)
8. Logical Database Design
9. Database Languages
10. Normalization Theory
11. Function Point Analysis
12. COCOMO Model
13. Currency Control
14. Security and Integrity

Suggested Readings:

1. Senn James A. : Analysis & Design of Information System,
2. Husain and Husain : Information Systems : Analysis, Design & Implementation,
3. Kanter Jarom : Management Information System
4. Brien James O. : Management Information System
5. Jawadekar : Management Information System
6. Sudarshan, Korth & Abraham : Database System Concepts,
7. Date C. J. : Database Systems
8. Urman : Oracle – 8 : PL/SQL Programming
9. Yeates Don : System Analysis & Design,
10. Awad : System Analysis & Design
11. Gruber M. : Understanding SQL,
12. Deshpande P. S. : Oracle
Objective:

The students are to be provided basic understanding of the RDBMS & SQL and the skills to make use of these in business organization.

Contents:

RDBMS: Introduction – Database and DBMS Software, Three Layered Architecture, Advantages and Disadvantages of a Database, History, Data Modeling- Object Oriented and Record Based models, E-R Model and E- R diagram Examples and Exercises, Hierarchical Model, Network Model and Relational Model, Normalization techniques- First Normal Form, Second Normal Form and Third normal Form, Examples and Exercises, E. F. Codd’s 12 Rules for a relational Database, Database concepts – Transaction Management, Properties of a Transaction, Commit and Rollback, Concurrency, Locking, Access Control, Data Integrity, Integrity Constraints, Auditing, Backup and Recovery, Data Dictionary- System Catalogue, Distributed Database and Distributed Data Access, Introduction to Client-Server and ODBC connectivity. SQL : SQL language-DML commands-Select, Insert, Update, Delete – retrieving data, summarizing data, adding data to the database, updating data to the database and selecting data. Simple queries – use of Where, Arithmetic, Comparison and logical operators, Order By, Group By and Group Functions, Multi table queries, Sub-queries, views; DDL commands – Table and View, Create, Alter, Drop Integrity Constraints, Transaction Processing – Commit, Rollback, Save point
LAB : SQL & MS Access
Suggested Readings:

1. Coleman, Pat and Peter Dyson, Internets, BPB Pub., Delhi, 1997
2. Keen, Peter and Mark MacDonald, The e-Process Edge, Delhi, Tata MacGraw Hill, 2000
4. Ricart, Alberto Manuel and Stephen Asbury, Active Server Pages 3, IDG Books, Delhi, 2000
Objective:

The course has been developed to introduce the concepts of electronic marketplace and electronic commerce among the potential information technology leaders.

Course Contents:


Suggested Readings:

Objective:

The objective of the course is to familiarize the participants with Security and control Information system use in the business world.

Course Contents:


Suggested Readings:

1. Ron Weber; EDP Auditing
2. Stephen Cobb; PC and LAN Security
3. Michel E. Kabey; Enterprise Security – Protecting Information Assets
4. Miora; Enterprise Disaster Recovery Planning
5. Computer Security for Dummies
6. Derek Atkins ; Internet Security