

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT
M.Sc. (Information Technology) Programme
5th Semester Syllabus

Effective From July-2002

Paper No. : 504

Paper Title : System Analysis & Design

[L:3, T:1]

1. Introduction to information systems development
 - 1.1 System analysis & design : an overview
 - 1.2 System analyst & users : Responsibilities
 - 1.3 Business information systems : categories
 - 1.4 Software, software characteristics.
 - 1.5 Problems with the software development
 - 1.6 Software development process models
 - 1.6.1 Waterfall model
 - 1.6.2 Prototyping
 - 1.6.3 Spiral model

2. Requirement Analysis & specifications
 - 2.1 Fact finding techniques
 - 2.2 Structured analysis: tools & techniques
 - 2.3 Data flow diagrams, E-R diagrams
 - 2.4 Data dictionary
 - 2.5 Characteristics, components of Requirement specification
 - 2.6 Software requirement specification document

3. System Design
 - 3.1 Design concepts & principles
 - 3.2 Design tools & techniques
 - 3.3 Various components of design
 - 3.4 Design methodology
 - 3.5 Design documentation

4. Testing & Implementation
 - 4.1 Testing fundamentals
 - 4.2 Functional testing
 - 4.3 Structural testing
 - 4.4 Testing process

Case studies may be carried out at appropriate stages of the course.

Reference Books:

1. Software Engineering A practitioner's approach - Roger S Pressman - McGraw Hill
2. Analysis and Design of Information Systems - James A Senn - McGraw Hill
3. An integrated approach to software engineering - Pankaj Jalote - Narosa Pub.
4. System Analysis & Design - Elias M Awad - Galgotia Publ,1997
5. Elements of system analysis - Marvin Gore - Galgotia Publ
6. Software Engineering Concepts - Fairley R E - Mc-Graw Hill
7. Software Engineering - Lewis T G - Mc-Graw Hill
8. Fundamentals of Software Engineering – Carlo Ghezzi
9. Software Reuse – Ivar Jacobson Martin Gris
10. Systems analysis & Design and the transition to objects:Sandra D Dewitz, McGraw Hill
11. System analysis & design methods: Whitten, Bentley & Barlow, Galgotia, 1995
12. The practical guide to structured Systems analysis Design, melilier Page-Jones, PHI
13. IEEE standard for software user documentation, std 1063-1987
14. Software engineering- A programming approach, D. Bell, I. Morrey, PHI