Subject Name: Information System: Analysis Design & Implementation

Subject Code : BCA 602 (N)

Topic : Introduction & Elaboration of Subject Syllabus

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Syllabus

UNIT 1

Overview of System Analysis and Design: Systems Development Life Cycle; concept and Models: requirements determination, logical design, physical design, test planning, implementation, planning and performance evaluation, communication, interviewing, presentation skills; group dynamics; risk and feasibility analysis; group based approaches, JAD, structures walkthroughs, and design and code reviews; prototyping; database design software quality metrics; application categories software package evaluation and acquisition.

UNIT 2

Information Requirement Analysis: Process modeling with physical logical data flow diagrams, data modeling with logical entity relationship diagrams.

UNIT 3

Developing a Proposal: Feasibility study and cost estimation.

System Design: Design of input and control, design of output and control, file design/database design, process, user interface design, prototyping; software constructors; documentation.

UNIT 4

Application Development Methodologies and CASE tools: Information engineering structured system analysis and design, and object oriented methodologies for application development data modeling, process modeling, user interface design, and prototyping, use of computer aided software engineering (CASE) tools in the analysis design and implementation of information systems.

UNIT 5

Design and Implementation on OO Platform: Object oriented analysis and design through object modeling technique, object modeling, dynamic modeling and functional object oriented design and object oriented programming systems for implementation, object oriented data bases.

UNIT 6

Managerial issues in Software Projects: Introduction to software markets; planning of software projects, size and cost estimates; project scheduling; measurement of software quality and productivity, ISO and capability maturity models for organizational growth.

Introduction to Information System

Information system is a set of interconnected data elements working together to collect, process, store, and distribute information to help coordination, visualization in an organization, analysis, and decision-making.

The Information system can be defined as a collection of **software, hardware**, and **telecommunications network** that people develop and use to **gather, create,** and **distribute useful data**, mainly in organizational settings.

Data: Data are raw facts & material or instructions in a formalized manner, which should be suitable for communication and processing.

Information: Information is processed data which is used to trigger certain actions or gain better understanding of what the data implies.

Types of Information

1. **Strategic Information:** This is the information needed for **long range planning** and directing the course the business should take.

2. **Tactical Information:** This type of information is needed to take **short range** decisions to run the business efficiently.

3. Operational Information: This type of information is needed for **day-to day** operations of a business organization.

4. Statutory Information : Information and reports which are required by Law to be sent to government authorities are normally clearly specified and required straightforward processing of data.

References:

1. V. Raja Raman : Analysis and Design of Information Systems
2. Jeffrey L Whitten & Lonnie D Bently: System Analysis and Design Methods
3. www.javatpoint.com
4. www.tutorialspoint.com