Course Title: System Analysis & Design

Course Code: CSIT755

Course Objectives

The objective of this course is to provide adequate understanding of systems concept, system analysis, and systems design, which would help them in having efficient and workable information system for management. To provide an understanding the role of Hardware and Software for realizing organizational Objectives and automation. To provide an understanding of the role of systems analyst and software development firms for their role in distributing meaningful ERP modules and other business intelligent system. To provide an understanding of the role of system analysis and design within various systems development stages. To develop an awareness of the different approaches that might be taken to systems design. To understand the activities of the management and systems analyst, and in the overall development of system. To develop an understanding of Testing software and complying the various software quality parameters. To develop an understanding of how to migrate old data within newly developed system with the help of various techniques.

Course Contents/Syllabus

Module I – Understanding System Concepts and Use within Industry

Importance and Meaning of System, Role of system / Information system in creating effective organization, Role of system / information system in value generation within organizational level/structure Role of automation system in business process and integrated business modules-manufacturing and service industry Traditional verses Online based ERP system Types of Systems and its element.

Module II – Understanding System Analysis and Design

Understanding the meaning of System Analysis and Design Figure out various reasons for Conducting system analysis Role of Management in conducting system analysis to cater competition and incorporating latest technology within the process Role of Software development firms-SAP, ORACLE, BAAN, PEOPLESOFT, MICROSOFT and GOOGLE in providing ERP and Business Intelligent
Software/System. Role of System Analyst and its function Attributes of System Analyst

Module III – Requirement Determination and Development Life Cycle

Understanding the needs for developing/upgrading system Defining the type of system-Integrated, stand alone, Automated and Online based System Methods / tools used for collecting and recording facts and requirements from users Various system development tools- Computer Aided Software Engineering (CASE), Joint Application Development (JAD) and Rapid Application Development (RAD) Introduction of System Development Life Cycle (SDLC) and Agile

Module IV Feasibility Study and Negotiation

Understanding / Importance of Feasibility Study/ Analysis Various Consideration while conducting Feasibility Study Steps of Conducting Feasibility Study Understanding feasibility Aspects: - Economical, Technological and Behavioral Understanding the system performance aspects- Data Center, Traditional HDD verses SSD, RAID, Integration of hardware and Software and Mainframe by giving examples of YouTube, Flipkart and Google Services Preparing Feasibility report and presenting final draft for system proposal Negotiation strategy

Module V- System Analysis, Design and Testing

Understanding the structured Tools- System Flow Chart, Data Flow Diagram, Data Dictionary, Decision Table, Decision Tree, and structured English for defining system specification with examples. Designing candidate system using structured tools Steps in Designing system Designing of –output system, input system, process, file design/Data base and interfaces Understanding the role of testing and its types Understanding the various software quality assurance

Module VI – System Implementation/ Maintenance and Review

Understanding the importance of Implementation within organization Training to the Users on candidate system Conversion Strategy / integrating old system into new system Choosing the best implementation strategy Maintenance plan/ AMC Review of organizational effectiveness Understanding the various reasons for success and failure of ERP system within organization

Text reading
• Avison, D. and Fitzgerald, G. Information systems development: methodologies, techniques and tools, McGraw-Hill
• Silver and Silver, System Analysis and Design, Addison Wesley
• James A. Senn-Analysis and Design of Information Systems
• System Analysis and Design, Elias M Awad