MBA – II Semester - III
System Analysis and Design (SA & D)

1. Course Objective:

Systems analysts need to know about computers and programming, but they also should know and have a desire to use computers to solve problems. When a new information system will be a solution to a problem, it is important to understand the problem itself. This is the essence of systems analysis—understanding and defining what it takes to solve the problem. There are often many alternative solutions that will solve the problem. These solutions must be identified and carefully evaluated. A solution is chosen based on a variety of factors. The best solution has the greatest benefits and the fewest risks. The chosen solution is defined in detail, and then it is implemented. This course is designed to impart understanding of the software analysis and its design. After completion of this course student will be able to analyze and design the software.

2. Course Duration:

The total hours for teaching this course will be 50 hours which will be divided into 40 sessions of 75 minutes each.

3. Course Content:

The course will contain following modules

Module	Module and Sub-Modules	Sessions	Marks (20% of 70 each)
I	Foundations for System Development: Systems development Environment, The Systems Analysts skills, The Origin of Software, Nature and characteristics of software, sources of software, Managing the Information System Project	6	10
II	Systems Planning: Identifying and selecting systems development projects, Initiating and Planning systems Development Projects	8	10
III	System Analysis: Determining System requirements, structuring systems process requirements, structuring system logic requirements, structuring system data requirements	10	20
IV	System Design : Designing Databases, Designing forms and reports, designing interfaces and dialogues, finalizing design specifications, designing distributed and internet systems	10	20
V	Systems implementation and Maintenance : System Implementation, Maintaining Information systems, Unified Modeling Language, The Systems Analysts Toolkit – Communication Tools, CASE Tools, financial Analysis Tools, Project	6	10

	Management tools, Internet Resource tools		

4. Teaching Methods:

The course will use the following pedagogical tools:

A. Case discussion covering a cross section of decision situations.

B. Discussions on issues and techniques of Marketing.

C. Projects/ Assignments/ Quizzes/ Class participation etc

5. Evaluation:

The evaluation of participants will be on continuous basis comprising of the following elements:

A	Projects/ Assignments/ Quizzes/ Class participation etc	Weightage 10% (Internal Assessment)
B	Mid-Semester examination	Weightage 20 % (Internal Assessment)
C	End –Semester Examination	Weightage 70% (External Assessment)

6. Text Books:

Any book covering the above modules can be used. However, being a case based approach is appropriate for this course, text book one is suggested.

Sr. No.	Authors	Name of the Books	Publisher	Edition & Year of Publication
T1	Jeffrey A. Hoffer, Joey F. George and Joseph S. Valacich,	Modern Systems Analysis and Design	Pearson	5th Edition
T2	Gary B. shelly, Thomas J. Cashman and Harry J. Rosenblant,	Systems Analysis and Design Methods	Cengage Learning	Latest Edition
T3	Alan Dennis, Barbara Haley Wixom and Roberta M.	Systems Analysis and Design	Roth, Wiley	4th Edition,

7. Reference Books:

Sr. No.	Authors	Name of the Books	Publisher	Edition & Year of Publication
R1	Roger, Pressman,	Software Engineering	McGraw Hill	Latest Edition
R2	Kendal and Kendal	System Analysis and Design	PHI	Latest Edition
R3	Waman S. Jawadekar	Software Engineering Principles and Practice	Tata McGraw Hill	Latest Edition
R4	Alan Dennis, Barbara Haley Wixom, Roberta Roth	System Analysis and Design	Wiley	Latest Edition
R5	Valaciach, George, Hoffer,	Essentials of System Analysis and Design	PHI	Latest Edition
R6	Denis, Wixom, Tegarden,	System Analysis and Design with UML Version 2.0 An Object Oriented Approach	Wiley	Latest Edition
R7	Ned Kock,	Systems Analysis & Design Fundamentals- A business process redesign approach	Sage	Latest Edition
R8	Er. V. K. Jain	System analysis and Design	Dreamtech Press	Latest Edition

8. List of Journals/ Periodicals/ Magazines/ Newspapers:

Computer Express, Chip, Data Quest,.

NB: The Instructor/s (Faculty Member/s) will be required to guide the students regarding suggested readings from Text(s) and references in items 6 and 7 mentioned above.

9. Session Plan:

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Session No.	Topics
1-8	Software Definition, Nature and characteristics of software, Types of software application legacy software, Software process Sources of software, Software Estimation Metrics Databases. , Estimation of Efforts and Scheduling, COCOMO, Cost Estimation Managing the Information systems project
9-17	PLANNING Identifying and selecting systems development projects Generic Process Model, Waterfall Model RAD Agile Development, Agile Process, Principles of Agile, Extreme Programming, Agile Process Models System Analysis
18-27	Principles of System Analysis, determining systems requirements, structuring systems process requirements, structuring systems logic requirements, Structuring systems data requirements System Modeling Structured System Analysis – Understanding of System Environment Work Flow Behavioral Model System Flow Chart SRS
28-33	System Design Design Development Process, Structural Design Methodology, Data Structure and Database Design, Input and Output Design, User Interface Design
34-40	System Implementation and Maintenance Object – Oriented Analysis and Design OOPs Basics Object oriented system development life cycle, , System Requirement Modelling, using 'USE CASES' Object Oriented Design Implementation, Modeling and Design using UML