GUJARAT TECHNOLOGICAL UNIVERSITY
Syllabus for Integrated MSc, 4th Semester
Branch: Information Technology
Subject Name: System Analysis and Design
Subject Code: 1340501

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks				Total Marks
				Theory Marks		Practical Marks		
L	T	P	C	ESE(E)	PA (M)	PA (I)	ESE (V)	
3	0	2	4	70	30	20	30	150

Course Content:

Sr. No.	Content	Teaching Hours	Module(%) Weightage
1.	**System Concepts and Information Systems Environment:** The System Concept: Definition, Characteristics of Systems, Elements of a System, Open and Closed System, Formal and Informal Information Systems, Computer based Information Systems, Management Information System, Decision Support System, General Business Knowledge, and Interpersonal Communicational System.	8	20
2.	**Feasibility Study:** System performance, Economic Feasibility, Technical Feasibility, Behavioral Feasibility, Steps in Feasibility Analysis. H/W & S/W Selection and Maintenance: The Computer Industry, S/W Industry, a Procedure for H/W & S/W Selection, Major Phases in Selection, Criteria for S/W Selection, The Used Computer, The Computer Contract.	8	20
3.	**The System Development Life Cycle:** Recognition of needs, Impetus for System Change, Feasibility Study, Analysis, Design, Implementation, Post implementation & Maintenance. The Role of the Systems Analyst: Historical Perspective, The War Effort, What Does it take to do System Analysis, Academic & Personal Qualifications, The Multifaceted role of the Analyst, The Analyst/User Interface, Behavioral issues.	8	20
4.	**Systems Planning & Initial Investigation:** Strategies for Determining Information Requirement, Problem Definition & Project initiation, Background Analysis, Fact Analysis, Review of Written Documents, Onsite Observations, Interviews & Questionnaires, Fact Analysis, Performance Analysis, Efficiency Analysis, Service Analysis.	8	20
5.	**Information Gathering:** What Kind of Information do we need? Information about the firms, Information gathering tools, the art of Interviewing, Arranging the Interview, Guides to a Successful Interview, Types of Interviews and Questionnaires, The StructuredAnd Unstructured Alternatives. The Tools of Structured Analysis:The Dataflow Diagram (DFD), Data Dictionary, Decision Trees and Structured English.	8	20

Reference Books:

1. Systems Analysis & Design, Awad E. M., Galgotia Publication.
2. System Analysis & Design, Mansoor A., Pragya Publication.
3. System Analysis & Design, Hawryszkiewyez I., PHI.

Course Outcome:

After learning the course, the students should be able to:

No.	CO statement
CO-1	Identify the requirements of software projects in an organization after studying Various functionalities of organization.
CO-2	Perform feasibility study of proposed system from different perspectives.
CO-3	Implement, test and maintain the software system.
CO-4	Get acquainted with different quality standards as well as learn about Management Information Systems.