



### Lesson Plan

Program: BCA

Semester: VI Course Code: BCA-602

Course Name: Information  
System Analysis and Design

#### Course Objectives

- CO 1. To study the concept of System Development Life Cycle.
- CO 2. To apply the process modeling with physical logical data flow diagrams.
- CO 3. To discuss the proposal of feasibility study and cost study.
- CO 4. Analysis of Application Development Methodologies.
- CO 5. To study the design and Implementation of Object oriented technology.
- CO 6. To discuss managerial issues in Software Projects.

**Session Duration:**60 minutes

**Participants:** BCA Sixth Semester Students

#### Entry level knowledge and skills of students

- i. Knowledge of Software Engineering
- ii. Computer Architecture

#### Equipment required in Classroom/Laboratory/Workshop

- i. Projector
- ii. White Board & Marker

#### Assessment Schemes

S. No.	Criteria	Marks (100)
1	CCSU End Term Examination	75
2	Internal Evaluation Scheme	25
2(a)	Teacher Assessment (Continuous Evaluation) (Assignment & Attendance)	25
2(a)(i)	Assignment -1	10
2(a)(ii)	Assignment -2	10
2(a)(iii)	Attendance (compulsory)	5



**Course Outcomes:**

- (CO1):** Able to understand the concept of System Development Life Cycle, Software Quality Metrics. *Understanding (K2)*
- (CO2):** Understand the concept of process modeling and data modeling using E-R diagram *Understanding (K2)*
- (CO3):** Interpretation of feasibility study and cost estimation *Understanding (K2)*
- (CO4):** Able to understand the information engineering structured system analysis and design *Understanding (K2)*
- (CO5):** Able to understand and design the applications on OO Platform *Understanding (K2)*
- (CO6):** Able to understand Managerial Issues in Software Projects *Understanding (K2)*

L. No.	Topics	SubTopics	Date of Implementation	Pedagogy	CO-Covered	Faculty Signature	HoD's Remark with Date
<b>Unit -1</b>							
1.	Discussion about the Subject Syllabus and Learning outcomes	Course Objective & Course Outcome			CO-1 TOCO-6		
2.	<b>Overview of System Analysis and Design</b>	Systems Development Life Cycle; concept and Models:		Lecture	CO-1		
3.		Interviewing and presentation skills		Group Discussion Buzz Grouping	CO-1		
4.		Group dynamics; risk and		Lecture Brainstorming	CO-1		
5.		Feasibility analysis					
6.		JAD, structures		Lecture Buzz Grouping	CO-1		



		walkthroughs, and design and code reviews;					
7.		Prototyping database design		Lecture Brainstorming	CO-1		
8.		Software quality metrics		Lecture	CO-1		

Unit -2							
9.	<b>Information Requirement Analysis</b>	Process modeling with physical logical diagram		Lecture	CO-2		
10.		Data flow diagrams		Lecture Brainstorming	CO-2		
11.		Data modeling with logical entity relationship diagrams		Lecture Group Discussion	CO-2		
Unit -3							
12.	<b>Developing a Proposal</b>	Feasibility study		Lecture Brainstorming	CO-3		
13.		Cost Estimation		Lecture Demonstration	CO-3		
14.		System Design		Lecture Brainstorming	CO-3		



15.		Design of input and control		Lecture Brainstorming	CO-3		
16.		Design of output and control		Lecture Brainstorming	CO-3		
17.		File design/database design		Lecture Brainstorming	CO-3		
18.		User Interface Design		Lecture Buzz Grouping	CO-3		
19.		Software Constructors and Documentation		Lecture Discussion	CO-3		
<b>Unit -4</b>							
20.	<b>Application Development Methodologies and CASE tools</b>	Information engineering structured system analysis		Lecture BuzzGrouping	CO-4		
21.		Information engineering structured system design		Lecture Brainstorming	CO-4		
22.		Object oriented methodologies for application development data modeling		Lecture Brainstorming	CO-4		
23.		Process Modelling		Lecture Brainstorming	CO-4		
24.		User Interface Design		Lecture BuzzGrouping	CO-4		
25.		Prototyping		Lecture BuzzGrouping	CO-4		
26.		Use of computer aided software engineering (CASE) tools		Buzz Grouping Lecture	CO-4		



Unit –5							
27.	<b>Design and Implementation of OO Platform</b>	Object oriented analysis and design through object modeling technique		Lecture Brainstorming	<b>CO-5</b>		
28.		Object modeling		Lecture Brainstorming	<b>CO-5</b>		
29.		Dynamic modeling		Lecture Brainstorming	<b>CO-5</b>		
30.		Functional object oriented design		Lecture Brainstorming	<b>CO-5</b>		
31.		Object Oriented Programming Systems object oriented data bases		Lecture Brainstorming	<b>CO-5</b>		
Unit –6							
32.	<b>Managerial issues in Software Projects</b>	Introduction to software market		Lecture Brainstorming	<b>CO-6</b>		
33.		Planning of software projects		Lecture Brainstorming	<b>CO-6</b>		
34.		Size and Cost Estimates		Lecture Brainstorming	<b>CO-6</b>		
35.		Project Scheduling		Lecture Brainstorming	<b>CO-6</b>		
36.		Measurement of Software Quality and Productivity		Lecture Brainstorming	<b>CO-6</b>		
37.		ISO and capability maturity models for organizational growth		Lecture Brainstorming	<b>CO-6</b>		

**TextBooks:**



1. System Analysis and Design, Elias M Awad

**ReferenceBooks:**

V.Rajaraman, Analysis and Design of Information System, Pearson Education, 1991.

I.T.Haryszkiewicz, Introduction of System Analysis and Design, Pearson Education, (PHI) 1998.

J.A.Senn, "Analysis and Design of Information Systems"

J.K.Whiten., L.D.Bentley, V.M.Beslow, "System Analysis and Design Methods", (Galgotia Publications Pvt.Ltd.) 1994