Daffodil Polytechnic Institute, Institute Code: 50238

Lesson Plan – Academic Session: March-2023 to August-2023

Subject Teacher : Md. Rajib Ahamed (Instructor).
Subject Name : **System Analysis and Design.**
Subject Code : 66671
Technology : Computer.
Semester : 7th
Reference Book Name : 1). System Analysis and Design (**Publisher:** Hoque Publication).
2). System Analysis and Design - Elias M. Awad
3). Analysis and Design of Information Systems - V. Rajaraman
4). System Analysis and Design Methods - Whitten, Bently, Barlow

Marks	Grade Point	Letter Grade	*Marks*	Grade Point	Letter Grade
80>	4.00	A+	55-59	2.75	B-
75-79	3.75	A	50-54	2.50	C+
70-74	3.50	A-	45-49	2.25	C
65-69	3.25	B+	40-44	2.00	D
60-64	3.00	B	0-39	0.00	F

Subject Aims:
To provide the students with an opportunity to acquire knowledge, skill and attitude in the fields of system analysis, design and computer based development with special emphasis on system concept, system development life cycle, system analysis, system design & Development, implementation & Information security and object-oriented system design.

Subject Outcome:
System concept, system development life cycle, system analysis, system design & Development, implementation& Information security and object-oriented system design.

Mark Distribution (for 150 Marks)			
Theory Marks		**Practical Marks**	
Midterm	20	PC	25
Class test	10	PF	25
Quiz test	10	-	
Final	60	-	
Total	**100**	**Total**	**50**

Class Time Distribution

Greetings	**2 Min**
Review Last Topic	**10 Min**
Topic Discussion	**66 Min**
Feedback	**10 Min**
Next Class Topic	**2 Min**

Total = 90 Min

Lecture	Chapter/ Exam / Industrial Visit	Learning Area	Learning Outcome	Class/Lab Supporting Equipment
01	**Chapter-1:** Understand the elements of information systems and management.	1.1 Define system and information systems. 1.2 Mention the characteristics of systems. 1.3 Describe the key elements of a system.	After the Class Students will be able to learn: • Understand the system and information systems. • Known about the key elements of a system. • Known about the characteristics of systems.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
02	**Chapter-1:** Understand the elements of information systems and management.	1.4 Define open and closed system. 1.5 Describe the characteristics of open system. 1.6 Describe the categories of information. 1.7 State the qualities of information. 1.8 State the need of computer based information system.	After the Class, Students will be able to learn: • Understand the characteristics of open system. • Known about the categories of information. • Understand the qualities of information. • Known about the need of computer based information system.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
03	**Class Test-1**			• **Answer sheet**
04	**Chapter-2:** Understand the Organizational functions and system development life cycle.	2.1 State the common functions of an organization. 2.2 State the various functions an educational institution.	After the Class, Students will be able to learn: • Learn Details about the common functions of an organization. • Learn Details about the various functions an educational institution.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
05	**Chapter-2:** Understand the Organizational functions and system development life cycle.	2.3 State the functions of various departments of a manufacturing organization. 2.4 Describe the Management and Information System levels in an organization. 2.5 State the meaning of system development life cycle. 2.6 Describe the function of each stages of system development life cycle (SDLC).	After the Class, Students will be able to learn: • Understand the Management and Information System levels in an organization. • Understand the functions of various departments of a manufacturing organization. • Understand the meaning of system development life cycle. • Describe the function of each stages of system development life cycle (SDLC).	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.

06	**Quiz Test-1**			• **N/A**
07	**Chapter-3:** Understand the roles of system analyst and functions of MIS facility center.	3.1 State the meaning of systems Analyst and system analysis 3.2 Describe the skills required for a system analyst.	After the Class, Students will be able to learn • Know about the meaning of systems Analyst and system analysis. • Know about the skills required for a system analyst.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
08	**Chapter-3:** Understand the roles of system analyst and functions of MIS facility center.	3.3 Describe the relationship between interpersonal and technical skills required in different stages of system development. 3.4 Mention the primary functions of an MIS facility center.	After the Class, Students will be able to learn: • Understand the relationship between interpersonal and technical skills required in different stages of system development. • Understand the primary functions of an MIS facility center.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
09	**Chapter-3:** Understand the roles of system analyst and functions of MIS facility center.	3.5 State the activities of administrator in an MIS facility center. 3.6 Describe different structures of systems analysis. 3.7 Describe different functions, responsibilities and duties of system analyst, programmers and operators.	After the Class, Students will be able to learn: • Understand the activities of administrator in an MIS facility center. • Understand the different structures of systems analysis. • Understand the different functions, responsibilities and duties of system analyst, programmers and operators.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
10	**Class Test-2**			• **Answer sheet**
11	**Chapter-4:** Understand the process of initial investigation and information gathering.	4.1 Mention the steps of systems analysis. 4.2 State the meaning of system planning. 4.3 List the probable fields of a user request form.	After the Class, Students will be able to learn: • Understand the steps of systems analysis. • Understand the meaning of system planning. • Know about the probable fields of a user request form.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
12	**Chapter-4:** Understand the process of initial investigation and information gathering.	4.4 Describe the steps of initial investigation process. 4.5 Mention the sources and categories of information.	After the Class, Students will be able to learn: • Understand the steps of initial investigation process.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.

		4.6 List the information gathering tools. 4.7 Mention the phases of information gathering.	• Learning about the sources and categories of information. • Learning about the information gathering tools.	
13	**Chapter-4:** Understand the process of initial investigation and information gathering.	4.8 Describe the information gathering methods. 4.9 State the guideline of a successful interview. 4.10 State the types of questionnaires.	After the Class, Students will be able to learn: • Learning about the information gathering methods, guideline of a successful interview and types of questionnaires.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
14	**Quiz Test-2**			• **N/A**
15	**Chapter-5:** Understand the tools of structured analysis.	5.1 State the meaning of structured analysis. 5.2 List the name of tools of structured analysis. 5.3 Define physical document flow diagram and logical data flow diagram (DFD).	After the Class, Students will be able to learn: • Learning about the name of tools of structured analysis and data flow diagram (DFD).	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
16	**Chapter-5:** Understand the tools of structured analysis.	5.4 State the meaning and functions of DFD symbols. 5.5 Mention the thumb rules of drawing DFDs. 5.6 Draw sample document flow diagram and data flow diagram (DFD).	After the Class, Students will be able to learn: • Learning about the meaning and functions of DFD symbols, rules of drawing DFDs and sample document flow diagram and data flow diagram (DFD).	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
17	**Chapter-5:** Understand the tools of structured analysis.	5.7 State the meaning of decision trees, decision table, structured English and data dictionary. 5.8 Prepare DFD, decision trees, decision table, structured English and data dictionary for sample small process like store/purchase/accounts /order/receive etc.	After the Class, Students will be able to learn: • Understand the meaning of decision trees, decision table, structured English and data dictionary.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.

18	**Chapter-6:** Understand the feasibility analysis.	6.1 Mention the meaning of feasibility study. 6.2 Describe the economic, technical and behavioral feasibility.	After the Class, Students will be able to learn: • Understand the meaning of feasibility study and the economic, technical and behavioral feasibility.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
19	**Chapter-6:** Understand the feasibility analysis.	6.3 Describe the steps in feasibility analysis. 6.4 State the categories of cost and benefit. 6.5 State the procedure for cost/benefit determination. 6.6 State the alternating solutions to be examined during feasibility analysis. 6.7 State the content of feasibility report.	After the Class, Students will be able to learn: • Understand the categories of cost and benefit and the procedure for cost/benefit determination. • Understand the alternating solutions to be examined during feasibility analysis and the content of feasibility report.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
20	**Class Test-3**			• **Answer sheet**
Midterm Exam				
21	**Chapter-7:** Understand the system design and development.	7.1 Mention the meaning of systems design and development. 7.2 Distinguish between logical design and physical design. 7.3 Mention activities covered in systems design and development.	After the Class, Students will be able to learn: • Understand the meaning of systems design and development, distinguish between logical design and physical design and systems design and development.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
22	**Chapter-7:** Understand the system design and development.	7.4 Mention the steps in physical systems design and design methodologies. 7.5 Mention the meaning of input/output design. 7.6 Mention the characteristics of different forms.	After the Class, Students will be able to learn: • Learning about the steps in physical systems design and design methodologies, meaning of input/output design and characteristics of different forms.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
23	**Lab Class-1**		• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet and different types of programming language and necessary tools (using Python/	

			Java/ C/C++ /C#/Visual programming/ MySQL/PostgreSQL/Oracle/ HTML/XML/JS/CSS or any other necessary software).	
24	**Chapter-7:** Understand the system design and development.	7.7 Describe the factors to be considered to design a form. 7.8 Describe the objectives of database and steps of database design. 7.9 State the structure and general principles to be used in designing output reports.	After the Class, Students will be able to learn: • Learning about the factors to be considered to design a form, objectives of database and steps of database design and the structure and general principles to be used in designing output reports.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
25	**Quiz Test-3**			• **N/A**
26	**Chapter-8:** Understand the process of systems testing and security.	8.1 Describe the objectives of control and testing the information systems. 8.2 Describe different types of systems test.	After the Class, Students will be able to learn: • Learning about the objectives of control and testing the information systems and describe different types of systems test.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
27	**Chapter-8:** Understand the process of systems testing and security.	8.3 Describe the quality factor specification. 8.4 State the term Information Security Management System (ISMS). 8.5 Explain the information security risk management process. 8.6 State the requirements to be met to ensure security of information systems.	After the Class, Students will be able to learn: • Learning about the quality factor specification and the term Information Security Management System (ISMS). • Understand the information security risk management process and the requirements to be met to ensure security of information systems.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
28	**Quiz Test-4**			• **N/A**
29	**Lab Class-2**		• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet and different types of programming language and necessary tools (using Python/ Java/ C/C++ /C#/Visual programming/ MySQL/PostgreSQL/Oracle/ HTML/XML/JS/CSS or any other necessary software).	
30	**Lab Class-3**		• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet and different types of programming language and necessary tools (using Python/ Java/ C/C++ /C#/Visual programming/ MySQL/PostgreSQL/Oracle/ HTML/XML/JS/CSS or any other necessary software).	

31	**Chapter-9:** Understand the implementation and software maintenance activities.	9.1 Mention the activities considered in systems conversion. 9.2 Describe the need of user training.	After the Class, Students will be able to learn: • Learning about the activities considered in systems conversion and the need of user training.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
32	**Chapter-9:** Understand the implementation and software maintenance activities.	9.3 Describe the post implementation activities. 9.4 State the points to be mentioned for requesting proposal from vendors. 9.5 Prepare a feature form to make a comparative evaluation of vendors' proposal for computer system.	After the Class, Students will be able to learn: • Understand the post implementation activities. • Learning about points to be mentioned for requesting proposal from vendors.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
33	**Lab Class-4**		• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet and different types of programming language and necessary tools (using Python/ Java/ C/C++ /C#/Visual programming/ MySQL/PostgreSQL/Oracle/ HTML/XML/JS/CSS or any other necessary software).	
34	**Chapter-10:** Understand the concept of object-oriented approach.	10.1 Define object oriented analysis and design. 10.2 State the elements of Object-Oriented system. 10.3 Distinguish between structured approach and object-oriented approach. 10.4 Define Unified Modeling Language (UML). 10.5 State the ways to apply UML. 10.6 Describe the perspectives to apply UML. 10.7 Describe the object-oriented system development life cycle.	After the Class, Students will be able to learn: • Understand the object oriented analysis and design. • Understand the Unified Modeling Language (UML) and the object-oriented system development life cycle.	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet.
35	**Class Test-4**			• **Answer sheet**
36	**Lab Class-5**		• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet and different types of programming language and necessary tools (using Python/	

		Java/ C/C++ /C#/Visual programming/ MySQL/PostgreSQL/Oracle/ HTML/XML/JS/CSS or any other necessary software).
37	**Syllabus Review Class**	
38	**Lab Syllabus Review Class**	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet and different types of programming language and necessary tools (using Python/ Java/ C/C++ /C#/Visual programming/ MySQL/PostgreSQL/Oracle/ HTML/XML/JS/CSS or any other necessary software).
39	**Group Presentation based on subject.**	
40	**Review class and Model Test.**	
41	**Lab Performance Exam**	• Projector, Computer, Pen drive, Keyboard, White Board, Marker, Internet and different types of programming language and necessary tools (using Python/ Java/ C/C++ /C#/Visual programming/ MySQL/PostgreSQL/Oracle/ HTML/XML/JS/CSS or any other necessary software).