Lesson Plan

Name of the Faculty:	Ms. Gaganpreet kaur
Discipline:	BCA
Semester:	4th
Subject:	Data Structures and Applications (B23-CAP-401)
Work Load(Lecture/Practical) per week(In hours):	Lecture-4

S. No	Lecture No.	Theory	
		Topic(Including Assignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording /Activity/Case Study)
1.	L1.	Data Structure Definition, Data Type vs. Data Structure	Chalk and Board and PPT
2.	L2.	Classification of Data Structures, Data Structure Operations,	Chalk and Board and PPT
3.	L3.	Applications of Data Structures.	Chalk and Board and PPT
4.	L4.	Algorithm Specifications: Performance Analysis and Measurement	Chalk and Board
5.	L5.	Time and Space Analysis of Algorithms- Average, Best and Worst Case Analysis	Chalk and Board
6.	L6.	Arrays: Introduction, Linear Arrays,	Chalk and Board
7.	L7.	Representation of Linear Array in Memory	Chalk and Board and PPT
8.	L8.	Two Dimensional Arrays	Chalk and Board and PPT
9.	L9.	Multidimensional Arrays	Chalk and Board
10.	L10.	Sparse Matrix and its Representation	Chalk and Board and PPT
11.	L11.	Operations on Array: Algorithm for Traversal, Selection,	Chalk and Board
12.	L12.	Insertion, Deletion	Chalk and Board and PPT
13.	L13.	String Handling: Storage of Strings	Chalk and Board and PPT
14.		**Assignment1**	On Paper

15.	L14.	Operations on Strings viz., Length, Concatenation, Substring	Chalk and Board and PPT
16.	L15.	Insertion, Deletion	Chalk and Board
17.	L16.	Replacement, Pattern Matching	Chalk and Board
18.	L17.	Linked List: Introduction	Chalk and Board
19.	L18.	Array vs. linked list	Chalk and Board and PPT
20.	L19.	Representation of linked lists in Memory	Chalk and Board and PPT
21.	L20.	Traversing a Linked List, Insertion	Chalk and Board
22.	L21.	Deletion, Searching into a Linked list	Chalk and Board and PPT
23.	L22.	Type of Linked List	Chalk and Board and PPT
24.	L23.	Stack: Array Representation of Stack	Chalk and Board and PPT
25.	L24.	Linked List Representation of Stack	Chalk and Board
26.	L25.	Algorithms for Push and Pop,	Chalk and Board
27.	L26.	Application of Stack: Polish Notation,	Chalk and Board and PPT
28.	L27.	Postfix Evaluation Algorithms,	Chalk and Board and PPT
29.		**Assignment2**	On Paper
30.	L28.	Infix to Postfix Conversion	Chalk and Board and PPT
31.	L29.	Infix to Prefix Conversion,	Chalk and Board and PPT
32.	L30.	Recursion.	Chalk and Board and PPT
33.	L31.	Introduction to Queues: Simple Queue, Double Ended Queue,	Chalk and Board
34.	L32.	Circular Queue,	Chalk and Board and PPT
35.	L33.	Priority Queue,	Chalk and Board and PPT
36.	L34.	Representation of Queues as Linked List and Array,	Chalk and Board and PPT
37.	L35.	Applications of Queue.	Chalk and Board and PPT

38.	L36.	Algorithm on Insertion and Deletion in Simple Queue	Chalk and Board and PPT
39.	L37.	Algorithm on Insertion and Deletion in Circular Queue.	Chalk and Board and PPT
40.	L38.	Priority Queues.	Chalk and Board and PPT
41.	L39.	Tree: Definitions and Concepts, Representation of Binary Tree	Chalk and Board and PPT
42.	L40.	Binary Tree Traversal (Inorder, postorder, preorder)	Chalk and Board and PPT
43.		**Assignment3**	On Paper
44.	L41.	Binary Search Trees – Definition, Operations	Chalk and Board and PPT
45.	L42.	searching, insertions and deletion	Chalk and Board and PPT
46.	L43.	Sorting Techniques: Bubble sort	Chalk and Board and PPT
47.	L44.	Merge sort	Chalk and Board
48.	L45.	Insertion Sort.	Chalk and Board
49.	L46.	Selection sort,	Chalk and Board and PPT
50.	L47.	Quick sort,	Chalk and Board and PPT
51.	L48.	Searching Techniques: Sequential Searching, Binary Searching	Chalk and Board and PPT

Name of the Faculty:	Ms. Tanya
Discipline:	BCA
Semester:	4th
Subject:	Front-end Development (B23-CAP-402)
Work Load(Lecture/Practical) per week(In hours):	Lecture-4

S. No	Lecture No.	Theory	
		Topic(Including Assignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording /Activity/Case Study)
1.	L1.	Introduction to objects	Chalk and Board and PPT
2.	L2.	Type of objects in JavaScript	Chalk and Board and PPT
3.	L3.	Creating objects	Chalk and Board and PPT
4.	L4.	Object methods	Chalk and Board
5.	L5.	Constructor function	Chalk and Board
6.	L6.	Prototype in JavaScript	Chalk and Board
7.	L7.	Inheritance using prototype chain	Chalk and Board and PPT
8.	L8.	Introduction to regexp	Chalk and Board and PPT
9.	L9.	Regular expression usage	Chalk and Board
10.	L10.	Modifiers	Chalk and Board and PPT
11.	L11.	Regexp patterns	Chalk and Board
12.	L12.	Regexp methods	Chalk and Board and PPT
13.	L13.	String methods for regexp	Chalk and Board and PPT
14.		**Assignment1**	On Paper
15.	L14.	Type conversion in JavaScript	Chalk and Board and PPT

16.	L15.	JavaScript events	Chalk and Board
17.	L16.	Event handler	Chalk and Board
18.	L17.	Event flow	Chalk and Board
19.	L18.	Event bubbling and capturing	Chalk and Board and PPT
20.	L19.	Event listeners	Chalk and Board and PPT
21.	L20.	Event types	Chalk and Board
22.	L21.	Introduction to DOM, Types of DOM	Chalk and Board and PPT
23.	L22.	DOM standards and methods	Chalk and Board and PPT
24.	L23.	Manipulating documents using DOM	Chalk and Board and PPT
25.	L24.	Handling images	Chalk and Board
26.	L25.	Table manipulation	Chalk and Board
27.	L26.	Animation	Chalk and Board and PPT
28.	L27.	Node and Node-list handling	Chalk and Board and PPT
29.		**Assignment2**	On Paper
30.	L28.	Introduction to BOM, DOM vs. BOM differences	Chalk and Board and PPT
31.	L29.	Window object and methods	Chalk and Board and PPT
32.	L30.	BOM navigator	Chalk and Board and PPT
33.	L31.	BOM history, BOM location	Chalk and Board
34.	L32.	BOM timer	Chalk and Board and PPT
35.	L33.	Session and persistent cookies	Chalk and Board and PPT
36.	L34.	Introduction to forms	Chalk and Board and PPT
37.	L35.	Form processing	Chalk and Board and PPT
38.	L36.	Forms object	Chalk and Board and PPT

39.	L37.	Accessing data from forms	Chalk and Board and PPT
40.	L38.	Form validation	Chalk and Board and PPT
41.	L39.	Additional features in forms	Chalk and Board and PPT
42.	L40.	Validation APIS	Chalk and Board and PPT
43.		**Assignment3**	On Paper
44.	L41.	Introduction to jquery, jquery Syntax	Chalk and Board and PPT
45.	L42.	Jquery Selectors	Chalk and Board and PPT
46.	L43.	Jquery Events	Chalk and Board and PPT
47.	L44.	Jquery Effects	Chalk and Board
48.	L45.	Jquery HTML	Chalk and Board
49.	L46.	Jquery Traversing	Chalk and Board and PPT
50.	L47.	Jquery AJAX	Chalk and Board and PPT
51.	L48.	Jquery Misc	Chalk and Board and PPT

Lesson Plan

Name of the Faculty:	Er. Rooz Munjal
Discipline:	BCA
Semester:	4th
Subject:	Computer Graphics B23-CAP-403
WorkLoad(Lecture/Practical)perweek(Inhours):	Lecture - 4

Sl No.	Lecture No.	Theory Topic(Including Assignment/Test/Quiz)	Pedagogy (PPT& Chalk-Board and Board/Video Recording /Activity/Case Study)
1	L1	Introduction: History of Computer Graphics (CG)	PPT &Chalk-Board
2	L2	Components of interactive graphics systems	PPT & Chalk-Board
3	L3	Display devices: Refresh CRT	PPT
4	L4	Plasma Panel displays,	Chalk-Board
5	L5	Raster-scan System	Chalk-Board
6	L6	Random scan System	PPT
7	L7	Graphic software	PPT & Chalk-Board
8	L8	Input/Output Devices, Tablets	PPT & Chalk-Board
9		**Query session, &Assignment-1**	
10	L9	Output Primitives: Points and Lines	Chalk-Board
11	L10	Line Drawing Algorithms	Chalk-Board
12	L11	DDA algorithm	Chalk-Board
13	L12	Bresenham's algorithm	Chalk-Board
14	L13	Circle drawing Algorithms	Chalk-Board
15	L14	Polynomial Method	PPT & Chalk-Board
16	L15	Bresenham's algorithm	PPT & Chalk-Board
17	L16	Parametric representation of Cubic Curves	Chalk-Board
18	L17	Bezier Curves	Chalk-Board
19		**Query Session**	
20	L18	2D Transformation: Use of Homogeneous Coordinates Systems	PPT & Chalk-Board
21	L19	Composite Transformation	Chalk-Board

22	L20	Translation	Chalk-Board
23	L21	Rotation	Chalk-Board
24	L22	Rotation about an Arbitrary Point	Chalk-Board
25	L23	Clipping and Windowing	Chalk-Board
26	L24	Clipping Operations	PPT & Chalk-Board
27	L25	Color CRT	Chalk-Board
28	L26	Applications of Computer Graphics	Chalk-Board
29	L27	LCD Panels	PPT & Chalk-Board
30	L28	Mirror Reflection	Chalk-Board
31	L29	Scaling	Chalk-Board
32		**Query Session**	
33	L30	Line Clipping Algorithms: The Mid-Point subdivision method	PPT & Chalk-Board
34	L31	Cohen-Sutherland Line Clipping Algorithms	PPT & Chalk-Board
35	L32	Polygon Clipping	Chalk-Board
36	L33	Sutherland Hodgeman Algorithms	Chalk-Board
37	L34	Text Clipping	Chalk-Board
38	L35	3-D object representations	Chalk-Board
39	L36	3-D Transformations	Chalk-Board
40		**Assignment 2**	On paper
41	L37	Translation, Rotation	Chalk-Board
42	L38	Scaling, Projections	Chalk-Board
43	L39	Hidden surface elimination	Chalk-Board
44	L40	Back face removal	Chalk-Board
45	L41	Depth Buffer algorithm	Chalk-Board
46	L42	Scan-line algorithm	Chalk-Board
47	L43	Depth sort algorithm	Chalk-Board
48	L44	Shading	Chalk-Board

Name of the Faculty:	Er. Priyanka Chauhan
Discipline:	BCA
Semester:	4th
Subject:	E-Commerce (B23-VAC-417)
WorkLoad (Lecture/Practical)perweek(Inhours):	Lecture

Sl No.	Lecture No.	Theory Topic(Including Assignment/Test/Quiz)	Pedagogy (PPT& Chalk-Board and Board/Video Recording /Activity/Case Study)
1	L1	Introduction to E-Commerce	Chalk-Board
2	L2	Nature & Concepts of E-Commerce	PPT & Chalk-Board
3	L3	Advantages & reasons for transacting online	PPT
4	L4	Categories of E-commerce	Chalk-Board
5	L5	Planning Online Business	PPT & Chalk-Board
6	L6	Nature and Dynamics of the Internet	PPT
7	L7	Pure Online vs. Brick	PPT & Chalk-Board
8	L8	Click Business.	PPT & Chalk-Board
9		**Query session, & Assignment-1**	
10	L9	Technology for Online Business – Internet	PPT
11	L10	IT Infrastructure in Business	PPT & Chalk-Board
12	L11	Middleware Contents	Chalk-Board
13	L12	Text and Integrating E-Business Applications	PPT & Chalk-Board
14	L13	Mechanism of making Payment through Internet	Chalk-Board
15	L14	Online Payment Mechanism	PPT
16	L15	Electronic Payment Systems	PPT
17	L16	Payment Gateways.	PPT & Chalk-Board
18		**Query Session**	
19	L17	Applications in E-Commerce	PPT & Chalk-Board
20	L18	E-Commerce Applications in Manufacturing	Chalk-Board
21	L19	Wholesale Manufacturing	Chalk-Board
22	L20	Retail Sector Manufacturing	Chalk-Board

23	L21	Service Sector Manufacturing	Chalk-Board
24		**Query Session**	
25	L22	Introduction to Virtual Existence in E-Commerce	Chalk-Board
26	L23	Virtual Existence Concepts using real life examples	PPT & Chalk-Board
27	L24	Working of Virtual Existence	Chalk-Board
28	L25	Advantages and Pitfalls of Virtual Organizations	Chalk-Board
29	L26	Security in E-commerce	PPT & Chalk-Board
30	L27	Digital Signatures	Chalk-Board
31	L28	Network Security	PPT & Chalk-Board
32		**Query Session**	
33	L29	Data Encryption Secret Keys	PPT & Chalk-Board
34	L30	Data Encryption.	Chalk-Board
35		**Assignment 2**	On paper

Lesson Plan

Name of the Faculty:	Ms. Chetna Singh
Discipline :	BCA
Semester :	4th
Subject :	Software Testing
Work Load (Lecture/Practical) per week (In hours) :	Lecture - 4

S.No.	Lecture No.	Theory	
		Topic(Including Assignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording /Activity/Case Study)
1.	L1	Definition of Software Testing and its Role	Chalk and Board
2.	L2	Terms: - Failure, Error, Fault, Defect, Bug	Chalk and Board
3.	L3	Goals of Testing	Chalk and Board
4.	L4	Principles of Testing	Chalk and Board
5.	L5	Software Testing Life Cycle	Chalk and Board
6.	L6	Verification and Validation: - V-testing Life cycle	Chalk and Board
7.	L7	Revision of Unit -1	Chalk and Board, PPT
8.	L8	Class Test	On Paper
9.	L9	Types of Testing	Chalk and Board
10.	L10	Black Box Testing: Overview: What is & When?	Chalk and Board
11.	L11	Techniques : Boundary Value Analysis	Chalk and Board
12.	L12	Equivalence Class Testing	Chalk and Board
13.	L13	Decision Table White Box Testing : What is white box Testing	Chalk and Board
		Assignment -1	On Paper
14.	L14	Need of white box Testing	Chalk and Board
15.	L15	Classification	Chalk and Board
16.	L16	Structural : Coverage, Path testing	Chalk and Board

17.	L17	Revision of Unit – 2	Chalk and Board , PPT
18.	L18	Class Test	Oral Test
19.	L19	Levels of Testing : Unit Testing : Overview	Chalk and Board
20.	L20	Integration Testing	Chalk and Board
21.	L21	Techniques: Graph based & Path based	Chalk and Board
22.	L22	Functional Testing	Chalk and Board
23.	L23	System Testing : Overview,	Chalk and Board
24.	L24	Categories: Reliability Security Performance Recovery	Chalk and Board
25.	L25	Acceptance Testing : Overview	Chalk and Board
26.	L26	Types of Acceptance Testing	Chalk and Board
27.	L27	Revision of 3rd Unit	Chalk and Board, PPT
28.	L28	Class Test	Oral Test
29.	L29	Test Planning	Chalk and Board
30.	L30	Preparing a Test plan	Chalk and Board
31.	L31	Scope management	Chalk and Board
32.	L32	Decide Test Approach	Chalk and Board
		Assignment - 2	On Paper
33.	L33	Setting Up Criteria for Testing	Chalk and Board
34.	L34	Identifying responsibilities	Chalk and Board
35.	L35	Staffing, training needs	Chalk and Board
36.	L36	Resource requirements	Chalk and Board
37.	L37	Test deliverables	Chalk and Board
38.	L38	Testing Tasks	Chalk and Board
39.	L39	Revision of 4th Unit	Chalk and Board, PPT
40.	L40	Class Test	Oral Test
41.	L41	Doubt from Any Unit	Chalk and Board

Lesson Plan

Name of the Faculty:	Mr Harshit
Discipline:	BCA
Semester:	IVth
Subject:	English Language and Communication Skill: Level 4 (B23-AEC-411)
Workload (Lecture/Practical) per week (In hours):	Lecture-3

S. No	Lecture No.	Theory	
		Topic (Including Assignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording /Activity/Case Study)
1.	L1.	Word formation and Types of formation	Chalk and Board
2.	L2.	Method of word formation (Compounding, Blending,)	Chalk and Board
3.	L3.	Back formation, Functional Conversion,	Chalk and Board
4.	L4.	Acronyms, Coinage	Chalk and Board
5.	L5.	Borrowing & Affixation	Chalk and Board
6.	L6.	Suffix and Prefixes	Chalk and Board
		Assignment 1	On Paper
7.	L7.	Sentence, Clause, phrase	Chalk and Board
8.	L8.	Types of Sentences and Conjunctions	Chalk and Board
9.	L9.	Rules for transformation of sentences (Simple to Compound and vice-versa)	Chalk and Board
10.	L10.	Rules for transformation of sentences (Simple to Complex and vice-versa)	Chalk and Board
11.	L11.	Rules for transformation of sentences (Compound to Complex and vice-versa)	Chalk and Board
12.	L12.	What is Public Speech	Chalk and Board

13.	L13.	Public Speaking: Confidence, Clarity and Fluency	Chalk and Board
14.	L14.	Modes of Speech delivery	Chalk and Board
15.	L15.	Proxemics and Chronemics	Chalk and Board
16.	L16.	What is Persuasion	Chalk and Board
17.	L17.	Persuasion Techniques: Appealing, Rhetorical Questions	Chalk and Board
18.	L18.	Persuasion Techniques: Humor, Colloquial	Chalk and Board
19.	L19.	Persuasion Techniques: Evidence, Anecdotes	Chalk and Board
20.	L20.	Starting a conversation technique: Do's and Don'ts	Chalk and Board
21.	L21.	Controlling a conversation technique: Do's and Don'ts	Chalk and Board
22.	L22.	Coherence and unity in a Paragraph	Chalk and Board
23.	L23.	Transition words and phrases learning Contextual Vocabulary through Reading a passage or Literary text	Chalk and Board
24.	L24.	Connections function to develop, relate, connect and move idea	Chalk and Board
25.		Assignment 2	On Paper