

## Lesson Plan

**Name of Faculty** : Er. Arushi Bansal, Assistant Professor of CSE  
**Discipline** : Computer Science and Engineering  
**Semester** : 6<sup>th</sup> (even)  
**Subject** : Andriod programming (CSE-306-L)  
**Lesson Plan Duration** : 15 weeks (from January to june-2019)

**Work Load (Lecture/Practical) per week (in hours):** Lectures-03hours, Practical-02 hours

Week	Theory		Topic Covered Date and Remarks		
	Lecture Day	Topic (Including Assignment/Test)	Date	HOD	Director-Principal
1 <sup>st</sup>	1	Oops concepts			
	2	Android history and version			
	3	Architectural view			
	4	Challenges of mobile platform			
2 <sup>nd</sup>	5	Installing software			
	6	Setup eclipse			
	7	Dalvik vm			
3 <sup>rd</sup>	8	Software stack			
	9	Core building block			
	10	Emulator			
	11	Manifest.xml			
4 <sup>th</sup>	12	r.java, hide title bar			
	13	Screen orientation			
	14	Working with buttons			
	15	Toast, custom toast			
5 <sup>th</sup>	16	Button, toggle button			
	17	Switch button			
	18	Image button			
	19	Check box			
6 <sup>th</sup>	20	Alert dialer			
	21	Spinner			
	22	Autocomplete text box			
	23	Rating bar			
7 <sup>th</sup>	24	Date picker, time picker			
7 <sup>th</sup>	<b>1<sup>st</sup> Minor Test</b>				
8 <sup>th</sup>	25	Progress bar			
	26	Quick contact budge			
	27	Analog clock and digital clock			
	28	Working with hardware button			
9 <sup>th</sup>	29	File download			
	30	Activity lifecycle			
	31	Activity example			
	32	Implicit intent, explicit intent			
10 <sup>th</sup>	33	Fragment lifecycle and example			
	34	Dynamic fragment			
	35	Option menu, content menu, popup menu			
	36	Relative layout, linear layout			
11 <sup>th</sup>	37	Table layout, grid layout			
	38	Array adapter			
	39	Array list adapter			
	40	Base adapter			
12 <sup>th</sup>	41	Grid view, web view, scroll view			
	42	Search view, tabhost			
	43	Dynamic list view, expanded list view			
	44	SQLite API			
13 <sup>th</sup>	45	SQLite spinner			
	46	SQLite list view			
	47	XML parsing sax			
	48	XML parsing sax			
14 <sup>th</sup>	<b>2<sup>nd</sup> Minor Test</b>				
15 <sup>th</sup>	49	XML parsing dom			
	50	XML pull parser			
	51	JSON basic			
	52	JSON parser			

## Lesson Plan

**Name of Faculty** : Er. Arushi Bansal, Assistant Professor of CSE  
**Discipline** : Computer Science and Engineering  
**Semester** : 6<sup>th</sup>  
**Subject** : android programming lab(CSE-306P)  
**Lesson Plan Duration** : 15 weeks (from January-2019 to April-2019)  
**Work Load (Lecture/Practical) per week (in hours):** Lectures-04hours, Practical-02 hours

Week	Theory/ Practical (Group-I/ II)		Topic Covered Date and Remarks		
	Practical Day	Topics/ Programs	Date	HOD	Director-Principal
1 <sup>st</sup>	1	Create "hello world" application to "hello world" in the middle of the screen in red colour with white background			
2 <sup>nd</sup>	2	Create sample application with login module, validate it for login screen			
3 <sup>rd</sup>	3	Create and validate a login application using username as email id else login button remains disabled			
4 <sup>th</sup>	4	Create a login application and open a browser with any one search engine			
5 <sup>th</sup>	5	Create an application to display "hello world" string the numbers of times user input a numeric value			
6 <sup>th</sup>	6	Create spinner with strings from resource folder. On changing spinner value change image			
7 <sup>th</sup>		Minor test 1 <sup>st</sup>			
8 <sup>th</sup>	7	Create an application to change screen colour according to user choice from menu			
9 <sup>th</sup>	8	Create a background application that will open activity on specific time			
10 <sup>th</sup>	9	Create an application that have spinner with list of animation names			
11 <sup>th</sup>	10	Create UI listing diploma engineering branches			
12 <sup>th</sup>	11	Create an application to call a phone number entered by the user			
13 <sup>th</sup>	12	Create an application that will create a database to store username and password			
14 <sup>th</sup>		Minor test 2 <sup>nd</sup>			
15 <sup>th</sup>	13	Create an application to insert, update and delete a record from database			

Lesson Plan

Name of faculty : Bharti  
 Discipline : Computer Science Engineering  
 Semester : 6th  
 Subject : **Intelligent Systems**  
 Lesson plan duration : 15 weeks

Week	Theory		Practical		TOPIC COVERD DATE AND REMARKS		
	Lecture Day	Topic	Practical Day	Topic	DATE	HOD	DIRECTOR PRINCIPAL
1 <sup>st</sup>	1	Foundation and history of AI	1	Study of PROLOG			
	2	Foundation and history of AI					
	3	AI problems and techniques					
	4	AI programming languages					
2 <sup>nd</sup>	5	Introduction to LISP and PROLOG- problem spaces and searches	2	Write a program to solve 8 queens problem.			
	6	Introduction to LISP and PROLOG- problem spaces and searches					
	7	Blind search strategies					
	8	Breadth first- Depth first- heuristic search techniques					
3 <sup>rd</sup>	9	Breadth first- Depth first- heuristic search techniques	3	Write a program to solve 8 queens problem.			
	10	Hill climbing					
	11	A * algorithm					
	12	AO* algorithm- game tree					
4 <sup>th</sup>	13	Min max algorithms	4	Solve any problem using depth first search.			
	14	Min max algorithms					
	15	Game playing- alpha beta pruning.					
	16	Game playing- alpha beta pruning.					
5 <sup>th</sup>	17	Knowledge representation issues	5	Solve any problem using best first search.			
	18	Knowledge representation issues					
	19	Predicate logic- logic programming					
	20	Semantic nets- frames and inheritance					
6 <sup>th</sup>	21	Constraint propagation	6	Solve 8-puzzle problem using best first search			
	22	Representing knowledge using rules					
	23	Rules based deduction systems.					
	24	Rules based deduction systems.					
7 <sup>th</sup>	<b>1<sup>st</sup> Minor Test</b>						
8 <sup>th</sup>	25	Reasoning under uncertainty	7	Solve Robot (traversal) problem using means End Analysis.			
	26	Review of probability					
	27	Baye's probabilistic interferences					
	28	Dempster shafer theory					
9 <sup>th</sup>	29	Heuristic methods	8	Solve traveling salesman problem.			
	30	Symbolic reasoning under uncertainty					
	31	Statistical reasoning					
	32	Fuzzy reasoning					
10 <sup>th</sup>	33	Temporal reasoning	9	Find union of two given lists			
	34	Non monotonic reasoning.					
	35	Planning in situational calculus					
	36	Representation for planning					
11 <sup>th</sup>	37	Partial order planning algorithm	10	Find intersection of two given lists			
	38	Learning from examples					
	39	Discovery as learning					
	40	Learning by analogy					
12 <sup>th</sup>	41	Explanation based learning.	11	Find factorial of a number			
	42	Neural nets, Genetic algorithms.					
	43	Principles of Natural language processing					
	44	Principles of Natural language processing					
13 <sup>th</sup>	45	Rule based systems architecture	12	Find permutation of a set			
	46	Expert systems					
	47	Expert systems					
	48	Knowledge acquisition concepts					
14 <sup>th</sup>	<b>2<sup>nd</sup> Minor test</b>						
15 <sup>th</sup>	49	Knowledge acquisition concepts	13	Perform concatenation of two sets			
	50	AI application to robotics					
	51	Current trends in intelligent systems					
	52	Current trends in intelligent systems					

### Lesson Plan

**Name of Faculty** : Prachi, Assistant Professor of CSE  
**Discipline** : Computer Science and Engineering  
**Semester** : 6<sup>th</sup> (even)  
**Subject** : computer graphics  
**Lesson Plan Duration** : 15 weeks (from January/ February-2019 to April/ May-2019)  
**Work Load (Lecture/Practical) per week (in hours):** Lectures-04hours, Practical-02 hours

Week	Theory/ Practical (Group-I/ II)		Topic Covered Date and Remarks		
	Practical Day	Topics/ Programs	Date	HOD	Director-Principal
1 <sup>st</sup>	1	Write a program for 2D line drawing as Raster Graphics Display			
2 <sup>nd</sup>	2	Write a program for circle drawing as Raster Graphics Display.			
3 <sup>rd</sup>	3	Write a program for polygon filling as Raster Graphics Display			
4 <sup>th</sup>	4	Write a program for line clipping			
5 <sup>th</sup>	5	Write a program for polygon clipping			
6 <sup>th</sup>	6	Write a program for displaying 3D objects as 2D display using perspective transformation			
7 <sup>th</sup>		<b>Minor test 1<sup>st</sup></b>			
8 <sup>th</sup>	7	Write a program for rotation of a 3D object about arbitrary axis.			
9 <sup>th</sup>	8	Write a program for Hidden surface removal from a 3D object.			
10 <sup>th</sup>	9	Write a program for Hidden line and surface elimination algo			
11 <sup>th</sup>	10	Write a program for Z-Buffer Algorithm			
12 <sup>th</sup>	11	Write a program for Painter's Algorithm			
13 <sup>th</sup>	12	Write a program for displaying 3D objects as 2D display using perspective transformation			
14 <sup>th</sup>		<b>Minor test 2<sup>nd</sup></b>			
15 <sup>th</sup>	13	Write a program for polygon clipping			

### Lesson Plan

**Name of Faculty** : Prachi, Assistant Professor of CSE  
**Discipline** : Computer Science and Engineering  
**Semester** : 6<sup>th</sup> (even)  
**Subject** : Computer graphics (CSE 303 E)  
**Lesson Plan Duration** : 15 weeks (from FEB to MAY-2019)

**Work Load (Lecture/Practical) per week (in hours):** Lectures-03hours, Practical-02 hours

Week	Theory		Topic Covered Date and Remarks		
	Lecture Day	Topic (Including Assignment/Test)	Date	HOD	Director-Principal
1 <sup>st</sup>	1	What is Computer Graphics			
	2	Computer Graphics Applications			
	3	Computer Graphics Hardware and software			
	4	Two dimensional Graphics Primitives			
2 <sup>nd</sup>	5	Points and Lines			
	6	Line drawing algorithms: DDA			
	7	Bresenham`s; Circle drawing algorithms			
	8	Using polar coordinates			
3 <sup>rd</sup>	9	Bresenham`s circle drawing			
	10	mid point circle drawing algorithm			
	11	Filled area algorithms			
	12	Scanline: Polygon filling algorithm			
4 <sup>th</sup>	13	boundary filled algorithm			
	14	Two/Three Dimensional Viewing			
	15	The 2-D viewing pipeline			
	16	windows, viewports			
5 <sup>th</sup>	17	window to view port mapping			
	18	Clipping: point, clipping line (algorithms):- 4 bit code algorithm			
	19	Sutherlandcohen algorithm			
	20	parametric line clipping algorithm (Cyrus Beck)			
6 <sup>th</sup>	21	Polygon clipping algorithm			
	22	Sutherland-Hodgeman			
	23	Two dimensional transformations			
	24	transformations, translation, scaling, rotation, reflection			
7 <sup>th</sup>	<b>1<sup>st</sup> Minor Test</b>				
8 <sup>th</sup>	25	Three dimensional transformations: Three dimensional graphics concept			
	26	Matrix representation of 3-D Transformations			
	27	Viewing in 3D			
	28	Projections, types of projections			
9 <sup>th</sup>	29	the mathematics of planner geometric projections			
	30	Hidden surface removal			
	31	Introduction to hidden surface removal			
	32	The Z- buffer algorithm			
10 <sup>th</sup>	33	scanline algorithm			
	34	area sub-division algorithm			
	35	Representing Curves and Surfaces			
	36	Parametric representation of curves			
11 <sup>th</sup>	37	Bezier curves			
	38	BSpline curves			
	39	Parametric representation of surfaces;			
	40	Interpolation method			
12 <sup>th</sup>	41	Illumination, shading, image manipulation			
	42	Illumination models			

	43	shading models for polygons			
	44	shadows, transparency			
13 <sup>th</sup>	45	What is an image			
	46	Filtering			
	47	image processing			
	48	geometric transformation of images			
14 <sup>th</sup>	<b>2<sup>nd</sup> Minor Test</b>				
15 <sup>th</sup>	49	Composition of 3-D transformation			
	50	coordinate systems			
	51	composite transformation			
	52	polygon clipping algorithm			

**Lesson Plan**

**Name of Faculty** : Dr. Sanjay Dahiya, Assistant Professor of CSE  
**Discipline** : Computer Science and Engineering  
**Semester** : CSE-VI<sup>th</sup> (Even-229)  
**Subject** : Analysis & Design of Algorithms (ADA) (CSE-308-L)  
**Lesson Plan Duration** : 15 weeks (from January/ February-2019 to April/ May-2019)  
**Work Load (Lecture/Practical) per week (in hours):** (3-L) + (2-T) hours

Week	Theory		Topic Covered Date and Remarks		
	Lecture- Day	Topic (Including Assignment/Test)	Date	HOD	Director- Principal
1 <sup>st</sup>	1	Algorithms			
	2	Algorithms as a Technology			
	3	Analysing algorithms			
	4	Asymptotic notations			
2 <sup>nd</sup>	5	Insertion sort			
	6	Query and Problems Redresses			
	7	Divide and Conquer General method			
	8	Binary search			
3 <sup>rd</sup>	9	Merge sort			
	10	Quick sort			
	11	Query and Problems Redresses			
	12	Strassen's matrix multiplication algorithms			
4 <sup>th</sup>	13	Analysis of algorithms for these problems			
	14	Sorting and Data Structure: Heapsort			
	15	Hash Tables			
	16	Red Black Trees			
5 <sup>th</sup>	17	Analysis of Algorithms			
	18	Greedy Method: General method			
	19	Knapsack problem			
	20	Minimum spanning trees			
6 <sup>th</sup>	21	Single source paths and analysis of these problems.			
	22	Query and Problems Redresses			
	23	Dynamic Programming: General method,			
	24	matrix chain multiplication			
7 <sup>th</sup>	<b>1<sup>st</sup> Minor Test</b>				
8 <sup>th</sup>	25	Longest common subsequence			
	26	Optimal binary search trees			
	27	Analysis of Algorithms			
	28	Query and Problems Redresses			
9 <sup>th</sup>	29				
	30	Back Tracking: General method			
	31	8 queen's problem			
	32	Query and Problems Redresses			
10 <sup>th</sup>	33	Graph colouring,			
	34	Hamiltonian cycles			
	35	Analysis of these problems			
	36	Query and Problems Redresses			
11 <sup>th</sup>	37	Branch and Bound: Method			
	38	O/I knapsack			
	39	Traveling salesperson problem			
	40	Query and Problems Redresses			
12 <sup>th</sup>	41	Analysis of Algorithms			
	42	NP Completeness			
	43	Polynomial time			
	44	Query and Problems Redresses			
13 <sup>th</sup>	45	Analysis of Algorithms			
	46	NP Completeness and Reducibility			
	47	NP Completeness and Reducibility			
	48	Query and Problems Redresses			
14 <sup>th</sup>	<b>2<sup>nd</sup> Minor Test</b>				
15 <sup>th</sup>	49	Analysis of Algorithms			
	50	NP-complete problems			
	51	NP-complete problems			
	52	Query and Problems Redresses			

## Lesson Plan

**Name of Faculty** : Sonam Bajaj, Assistant Professor of CSE  
**Discipline** : Computer Science and Engineering  
**Semester** : 6<sup>th</sup> (even)  
**Subject** : Theory of Automation (CSE- 310L)  
**Lesson Plan Duration** : 15 weeks (from Jan to May-2019)  
**Work Load (Lecture/Practical) per week (in hours):** Lectures-04 hour

Week	Theory		Topic Covered Date and Remarks		
	Lecture Day	Topic (Including Assignment/Test)	Date	HOD	Director-Principal
1 <sup>st</sup>	1	Finite State system			
	2	NDFA			
	3	DFA			
	4	Equivalence of DFA and NDFA			
2 <sup>nd</sup>	5	Finite automata with E moves			
	6	Regular expression			
	7	Regular expression conversion			
3 <sup>rd</sup>	8	Arden method conversion			
	9	Concept of basic machine			
	10	Properties and limitation of FSM			
	11	Moore machine with examples			
4 <sup>th</sup>	12	Mealy machine with examples			
	13	Equivalence of Moore and Mealy machine			
	14	Properties of regular sets			
5 <sup>th</sup>	15	Pumping lemma for regular sets			
	16	Application of pumping lemma			
	17	Closure properties of regular set			
	18	Myhill Nerode theorem			
6 <sup>th</sup>	19	Minimization of finite automata			
	20	Minimization algorithm			
	21	Context free grammar			
	22	Context sensitive grammar			
7 <sup>th</sup>	23	Reduced forms			
	24	Assignment 1 <sup>st</sup>			
8 <sup>th</sup>	<b>1<sup>st</sup> Minor Test</b>				
9 <sup>th</sup>	25	Removal of useless symbols			
	26	Unit productions			
	27	Ambiguity regular grammar			
	28	Chomsky normal form			
10 <sup>th</sup>	29	Greibach normal form			
	30	Introduction to pushdown machine			
	31	Application of pushdown machine			
11 <sup>th</sup>	32	Problems and solutions			
	33	Turning machine			
	34	Non deterministic turning machine			
	35	Deterministic turning machine			
12 <sup>th</sup>	36	Design of turning machine			
	37	Halting problem of turning machine			
	38	PCP problems			
13 <sup>th</sup>	39	Assignment 2			
	40	Problem and solutions			
	41	Chomsky hierarchies			
	42	Chomsky hierarchies of grammar			
14 <sup>th</sup>	43	Unrestricted grammar			
	44	Context sensitive language			
	45	Relations between languages of class			
	46	Problem and solutions			
15 <sup>th</sup>	47	Examples of grammars			
	48	Examples of hierarchies			
	<b>2<sup>nd</sup> Minor Test</b>				
	49	Computability			
16 <sup>th</sup>	50	Basic concept of Computability			
	51	Primitive recursive functions			
	52	Problem and solutions			

## Lesson Plan

**Name of Faculty :** Varsha Rani,Assistant professor  
**Discipline :** CSE  
**Semester :** 6<sup>th</sup>  
**Subject :** Advance Programming  
**Lesson Plan Duration:** 15 weeks (from January, 2019 to July, 2019)  
**Work Load (Lecturer/Practical) per week (in hours):** Lectures 08 hours

Week	Theory		Topic Covered Date and Remarks		
	Lecture Day	Topic (Including Assignment/Test)	Date	HOD	Director-Principal
1 <sup>st</sup>	1	Review of C language			
	2	Standard library			
	3	Basics of C environment			
	4	Preprocessor directives			
2 <sup>nd</sup>	5	Simple c programmes			
	6	Header files			
	7	Review of data structure			
	8	Array ,stack, queue			
3 <sup>rd</sup>	9	Linked list			
	10	Storage representation			
	11	Access methods			
	12	Searching methods			
4 <sup>th</sup>	13	Sequential search			
	14	Binary search			
	15	Indexes search			
	16	Sorting and types			
5 <sup>th</sup>	17	Internal sorting			
	18	External sorting			
	19	Their methods			
	20	Bubble sort			
6 <sup>th</sup>	21	Insertion sort			
	22	Selection sort			
	23	Merge sort			
	24	Heap sort			
7 <sup>th</sup>	-----Ist Minor Test-----				
8 <sup>th</sup>	25	Radix sort			
	26	Quick sort			
	27	Comparison wrt their efficiency			
	28	Introduction to c++			
9 <sup>th</sup>	29	C++ environment			
	30	Objects			
	31	Access specifiers			
	32	Public,private,and protected			
10 <sup>th</sup>	33	Constructors			
	34	Their types			
	35	Default and copy			
	36	Destructors			
11 <sup>th</sup>	37	Function overloading			
	38	Operator overloading			
	39	Friend function			
	40	Inheritance concepts			
12 <sup>th</sup>	41	Virtual function			
	42	<b>Assignment queries</b>			
	43	Inheritance types			
	44	Single inheritance			
13 <sup>th</sup>	45	Multiple inheritance			
	46	Multilevel inheritance			
	47	Hybrid inheritance			
	48	Hierarchal inheritance			
14 <sup>th</sup>	-----2 <sup>nd</sup> Minor Test-----				
15 <sup>th</sup>	49	Inline function			
	50	Implementing friend function			
	51	Implementing virtual function			
	52	<b>Assignment questions</b>			