Govt. College, Uklana (Hisar)

Department of Computer Science

Lesson Plan

Session 2023-24

Govt College Uklana (Hisar)

Lesson Plan

Subject: **Computer Graphics (CCsL-603)**

Name of Assistant Professor: **Dr. Tanuja, Assistant Professor**

Month/ Week	Topic
January-1st Week	Historical Perspective of CG, Basic Elements of CG
2nd Week	Modelling, Rendering. Animation
3rd Week	Applications of CG, Keyboard, Mouse, Light pen, graphic Tables
4th Week	Joysticks, Trackball, Flatbed Scanner, and **Revision, TEST**
Feburary-1st Week	Hard copy devices- Laser Printer, Flatbed Plotters
2nd Week	Pixel, Resolution, Aspect Ratio, Refresh Rate, Interlacing
3rd Week	Cathode Ray Tube, Flat Panel Display- LCD and Plasma Panel
4th Week	Raster and Random scan display system and **Revision , TEST**
March- 1st Week	Line Generation Algorithms, DDA algorithm, Bresenham's Line Generation Algorithm
2nd Week	Circle Generation Algorithms- Bresenham's Algorithm and Midpoint Circle Algorithm
3rd Week	Polygon Filling Algorithms- Scane Line Algorithm, Viewing & Clipping- Point Clipping and Line Clipping
April-1st Week	Cohen- Sutherland Line Clipping Algorithm, Polygon Clipping (Sutherland Hodgman Algorithm) and **Revision, TEST**
2nd Week	2D, Cartesian and Homogeneous Co-ordinate system
3rd Week	Geometric Transformations (Translation, Scaling, Rotation, Reflection)
4th Week	Geometric Transformation, Mathematics of Projections and **Revision, TEST**

Govt College Uklana (Hisar)

Lesson Plan

Subject: **Python Programming (CCsL-604)**

Name of Assistant Professor: **Dr. Tanuja, Assistant Professor**

Month/ Week	Topic
January-1st Week	History and Features of Python Programming, Python Interpreter, Variable, Identifiers and Literal, Token, Keywords, Data Types,
2nd Week	Arithmetic operators, Relational operators, Logical operators, Bitwise operators, Assignment operators, Membership operators, Identity operators,
3rd Week	operator precedence, Comment, Indentation, Need for indentation , Built in function-input, eval, composition, print, type, round, min and ma. Power,
4th Week	type conversion, Random number generation, mathematical function, getting help on a function, Assert Statement and **Revision**, TEST
Feburary-1st Week	Control Statement- if conditional statement, for and while statements, break, continue and Pass Statements
2nd Week	Function Definition and Call, Function Arguments- Variable Function Arguments, Default Arguments
3rd Week	Keyword Arguments, Arbitrary Arguments, Command Line Arguments, Global and Local Variables, Accessing local variable outside the scope
4th Week	Using Global and Local variables in same code, using Global Variable and Local variable with same name and **Revision, TEST**
March- 1st Week	String as compound data type, string operators- concatenation, repetition, Membership operation, Slicing operation
2nd Week	String methods- count, find, rfind, capitalize, title, lower, upper, swapcase, islower, isupper istitle, replace, isalpha, isdigit, isalnum, string processing examples
3rd Week	List operation- multiplication, concatenation, lenth, indexing, slicing, min. max, sum, membership operator, list functions- append, extend
April-1st Week	Remove, pop, cont, index, insert, sort, reverse, Recursive solutions for problems on numbers, string and list and **Revision, TEST**
2nd Week	OOPS , Introduction to Classes, Method, Class object, Instance object, Method object,
3rd Week	Class as abstract, data type, Date Class. Access attributes using functions-getattr, hasattr, setattr, delattr, Built in class attributes of class object,
4th Week	Graphics- screen objects- Point and line, box, polygon, circle, arc, Screen Object Methods Move _to() etc and **Revision, TEST**