DR. K. N. Modi Foundation, Modinagar

Name of Faculty : **Parbhat Gupta** Institute : **Dr. KNMIET, Modinagar** Department : **CS/IT**

Subject &Code : **CD KCS 502** Semester : **- VIth** Total Lecture : **- 40**

ACADEMIC CURRICULUM COVERAGE PLAN

Unit No. (With No. of Periods Allotted)	Lecture No.	Topics with Periods/Sessions	Methodology (Lecture/Assignment/Test/Revision/Problem Solving)	Date of Conduct		Deviation (if any)
				Planned Date	Actual Date	
Unit-1(08)	1	Phases and passes, Bootstrapping, Finite state machines	Lecture	05/09	05/09	
	2	Regular expressions and their applications to lexical analysis	Lecture	08/09	08/09	
	3	Optimization of DFA-Based Pattern Matchers	Lecture	09/09	09/09	
	4	Implementation of lexical analyzers	Lecture	10/09	10/09	
	5	Lexical-analyzer generator	Lecture	12/09	12/09	
	6	LEX compiler	Lecture	12.09	12/09	
	7	Formal grammars and their application to syntax analysis	Lecture	15/09	15/09	
	8	BNF notation	Lecture	15/09	15/09	
	9	Ambiguity, YACC	Lecture	16/09	16/09	
	10	The syntactic specification of programming languages	Lecture	16/09	16/09	
	11	Context free grammars	Lecture	17/09	17/09	
	12	Derivation and parse trees	Lecture	18/09	18/09	
	13	Capabilities of CFG,	Lecture	19/09	19/09	
	14	**Revision/Problem of UNIT-1**	Lecture	19/09	19/09	
	15	**UNIT -1 TEST**	Test	20/09	20/09	
Unit-2(08)	16	Parsers, Shift reduce parsing	Lecture	21/09	21/09	
	17	Operator precedence parsing	Lecture	21/09	21/09	
	18	Top down parsing	Lecture	22/09	22/09	
	19	Predictive parsers Automatic Construction of efficient Parsers	Lecture	23/09	23/09	
	20	LR parsers, the canonical Collection of LR (0) items	Lecture	27/09	27/09	
	21	Constructing SLR parsing tables	Lecture	28/09	28/09	
	22	Constructing Canonical LR parsing tables	Lecture	28/09	28/09	
	23	Constructing LALR parsing tables	Lecture	29/09	29/09	
	24	Using ambiguous grammars	Lecture	29/09	29/09	
	25	An automatic parser generator	Lecture	06/10/22	06/10	
	26	Implementation of LR parsing tables	Lecture	06/10/22	06/10	
	27	**Revision/Problem of UNIT-2**	Lecture	13/10/22	13/10	
	28	**UNIT - 2 TEST**	Test	13/10/22	13/10	
Unit-3(08)	29	Syntax-directed Translation schemes	Lecture	14/10/22	14/10	
	30	Implementation of Syntax-directed Translators	Lecture	18/10/22	18/10	
	31	Intermediate code, postfix notation	Lecture	18/10/22	18/10	
	32	Parse trees & syntax trees, Three address code	Lecture	19/10/22	19/10	
	33	Quadruple & triples	Lecture	20/10/22	20/10	
	34	Translation of assignment statements	Lecture	20/10/22	20/10	

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	35	Boolean expressions, statements that alter the flow of control	Lecture	
	36	Postfix translation, translation with a top down parser	Lecture	31/10/22 31/10
	37	More about translation: Array references in arithmetic expressions	Lecture	01/11/22 01/11
	38	Procedures call	Lecture	01/11/22 01/11
	39	Declarations and case statements	Lecture	02/11/22 02/11
	40	**Revision/Problem of UNIT-3**	Lecture	03/11/22 03/11
	41	**UNIT -3 TEST**	Test	04/11/22 04/11
Unit-4(08)	42	Data structure for symbols tables	Lecture	04/11/22 04/11
	43	Representing scope information. Run-Time Administration	Lecture	07/11/22 07/11
	44	Implementation of simple stack allocation scheme	Lecture	23/11/22 23/11
	45	Storage allocation in block structured language	Lecture	23/11/22 23/11
	46	Error Detection & Recovery	Lecture	24/11/22 24/11
	47	Lexical Phase errors	Lecture	24/11/22 24/11
	48	Syntactic phase errors semantic errors	Lecture	25/11/22 25/11
	49	Revision/Problem of UNIT-4	Lecture	25/11/22 25/11
	50	**UNIT - 4 TEST**	TEST	29/11/22 29/11
	51	Design Issues, the Target Language	Lecture	29/11/22 29/11
	52	Addresses in the Target Code	Lecture	30/11/22 30/11
	53	Basic Blocks and Flow Graphs	Lecture	30/11/22 30/11
	54	Optimization of Basic Blocks	Lecture	02/12/22 02/12
	55	Code Generator. Code optimization	Lecture	02/12/22 02/12
Unit-5(08)	56	Machine-Independent Optimizations	Lecture	03/12/22 03/12
	57	Loop optimization	Lecture	03/12/22 03/12
	58	DAG representation of basic blocks	Lecture	05/12/22 05/12
	59	Value numbers and algebraic laws	Lecture	05/12/22 05/12
	60	Global Data-Flow analysis	Lecture	06/12/22 06/12
	61	**Revision/problem of, UNIT-5**	Lecture	06/12/22 06/12
	62	**UNIT – 5 TEST**	TEST	07/12/22 07/12/22

Assistance Needed: 2

1) **All 5 Units Covered in Total 40 Lectures.**
2) **5 Lectures for Unit Tests.**
3) **17 Lectures for Revision/Problem Solving.**

Date: -

Signature of HOD: -

Signature of Faculty: -

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Lecture-Plan

PROGRAM	SEM	SUBJECT NAME	SUBJECT CODE	PERIODS (As per University)			EVALUATION SCHEME				SUBJECT TOTAL
							SESSIONAL			ESE	
				L	T	P	CT	TA	TOTAL		
B.Tech	SECOND	Engg.mathematics-II	BAS-203	3	1	0	20	10	30	70	100

Periods (Actual)			Name of Faculty	Name of Subject Coordinator	Date of Commencement	Total lectures planned	Date of Conclusion
L	T	P					
6	2	0	DEVENDRA KUMAR	DEVENDRA KUMAR	10/04/2023	64	30/06/23

Test 1: 06/05/2023
Test 2: 08/06/2023
PUT: 05/07/2023

Lecture Schedule	Date (Planned)	Topics/Contents	Date (Actual)
		UNIT-I: Ordinary Differential Equation of Higher Order	
Lecture -1	10/04/2023	Ordinary Differential Equation of Higher Order	13/04
Lecture -2	11/04/2023	Linear and non linear differential equations.	17/04
Lecture -3	12/04/2023	Order and degree of the differential equation and solution of the linear differential equation.	17/04
Lecture -4	13/04/2023	Linear differential equation of nth order with constant coefficients.	19/04
Lecture -5	14/04/2023	Rules for finding C.F of the differential equation and problems based on C.F.	20/04
Lecture -6	17/04/2023	Rules for finding C.F of the differential equation and problems based on C.F.	21/04
Lecture -7	18/04/2023	Rules for finding P.I. of the differential equation and problems based on P.I.	24/04
Lecture -8	19/04/2023	Rules for finding P.I. of the differential equation and problems based on P.I.	24/04
Lecture -9	20/04/2023	Solution of linear differential equations of nth order with constant coefficients.	25/04
Lecture -10	21/04/2023	Solution of linear differential equations of nth order with constant coefficients.	26/04
Lecture -11	24/04/2023	Second order linear differential equations with variable coefficients (Cauchy-Euler equations).	27/04

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Lecture -12	25/04/2023	Solution by changing the independent variable method.	01/05
Lecture -13	26/04/2023	Solution by changing the independent variable method.	01/05
Lecture -14	27/04/2023	Solution by Method of variation of parameters.	02/05
Lecture -15	28/04/2023	Solution by Method of variation of parameters.	02/05
Unit-II: Laplace Transform			
Lecture -16	01/05/2023	Introduction of Laplace transform.	08/05
Lecture -17	02/05/2023	First shifting and Second shifting theorem	08/05
Lecture -18	03/05/2023	Problems on First shifting and Second shifting theorem.	09/05
Lecture -19	04/05/23	Problems on Laplace transform of derivatives and integrals.	10/05
Lecture -20	05/05/23	Laplace transform of F(t)= t^n.f(t), F(t)= f(t)/t	12/05
Lecture -21	05/05/23	Laplace transform of periodic functions,	12/05
Lecture -22	08/05/23	Problems on Laplace transform of unit step function and Dirac-delta function.	15/05
Lecture -23	09/05/23	Existence, Initial and Final value theorem.	16/05
Lecture -24	10/05/23	Introduction of Inverse Laplace Transform.	17/05
Lecture-25	11/05/23	Problems on Inverse Laplace Transform.	17/05
Lecture -26	12/05/23	Problems on Inverse Laplace Transform.	18/05
Lecture -27	12/05/23	Problems on Inverse Laplace Transform.	18/05
Lecture -28	15/05/23	Convolution theorem.	19/05
	16/05/23	Convolution theorem.	19/05
Lecture -29	17/05/23	Application of L.T to solve simple linear and Simultaneous differential equations.	23/5
Lecture -30	18/05/23	Application of L.T to solve simple linear and Simultaneous differential equations.	23/05

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		UNIT-III: Sequences and Series	2
Lecture -31	19/05/2023	Introduction: Sequences and Series	24/05
Lecture -32	22/05/2023	Definition of Sequence and series with examples	25/05
Lecture -33	23/05/2023	Convergence of sequence	25/05
Lecture -34	24/05/2023	Convergence of sequence	26/05
Lecture -35	25/05/2023	Convergence of sequence and series Comparison Test	29/05
Lecture -36	26/05/2023	Convergence of sequence and series Cauchy Root Test	29/05
Lecture -37	26/05/2023	Convergence of sequence and series D' Alembert's test	30/05
Lecture -38	29/05/2023	Convergence of sequence and series D' Alembert's test	31/05
Lecture -39	30/05/2023	Convergence of sequence and series Raabe's test	01/06
Lecture -40	31/05/2023	Fourier series expansion of a periodic function.	01/06
Lecture -41	01/06/2023	Fourier series expansion of a periodic function.	02/06
Lecture -42	02/06/2023	Fourier series expansion of an even function.	02/06
Lecture -43	02/06/2023	Fourier series expansion of an odd function.	05/06
Lecture -44	05/06/2023	Half range Fourier sine and cosine series.	06/06
Lecture -45	06/06/2023	Half range Fourier sine and cosine series.	12/06
		UNIT-IV: Complex Variable	
Lecture -46	07/06/2023	Differentiation: Limit, Continuity and differentiability	14/06
Lecture -47	08/06/2023	Differentiation: Limit, Continuity and differentiability	15/06
Lecture -48	09/06/2023	Functions of complex variable, Analytic functions	16/06
Lecture-49	09/06/2023	Cauchy- Riemann equations (Cartesian and Polar form)	16/06
Lecture -50	12/06/2023	Harmonic function	19/06
	13/06/23	Method to find Analytic functions	20/06
Lecture -51	14/06/23	Method to find Analytic functions	20/06
Lecture -52	15/06/23	Conformal mapping, Mobius transformation and their properties.	21/06
Lecture-53	16/06/23	Conformal mapping, Mobius transformation and their properties.	21/06
Lecture-54	16/06/23	Conformal mapping, Mobius transformation and their properties.	22/06

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		UNIT-V: Complex Variable –Integration	
Lecture-55	19/06/23	Complex integrals, Contour integrals.	23/06
Lecture-56	20/06/23	Complex integrals, Contour integrals.	23/06
Lecture-57	21/06/23	Cauchy- Integral theorem	24/06
Lecture-58	22/06/23	Cauchy integral formula	24/06
Lecture-59	23/06/23	Taylor's series (without proof),	26/06
Lecture-60	26/06/23	Laurent's series (without proof),	26/06
Lecture-61	27/06/23	Singularities, Classification of Singularities, zeros of analytic functions.	27/06
Lecture-62	28/06/23	Cauchy Residue theorem	27/06
Lecture-63	29/06/23	Cauchy Residue theorem	28/06
Lecture-64	30/06/23	Evaluation of real integrals	30/06

References Books:

(1) H.K DASS

(2) N.P.BALI

(3) E. Kreyszig, Advance Engineering Mathematics, John Wiley & Sons, 2005.

(4) Peter V. O'Neil, Advance Engineering Mathematics, Thomson (Cengage) Learning, 2007.

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Name of Faculty: - **Ajit Singh** Institute: - **Dr. KNMIET, Modinagar** Department: **CS/IT**

Subject &Code : - **python Programming& KCS 402** Semester : - **IVth** Total Lecture : - **40**

ACADEMIC CURRICULUM COVERAGE PLAN

Unit No. (With No. of Periods Allotted)	Lecture No.	Topics with Periods/Sessions	Methodology (Lecture/Assignment/Test/Revision/Problem Solving)	Date of Conduct		Deviation (if any)
				Planned Date	Actual Date	
Unit-1(08)	1	The Programming Cycle for Python	Lecture	11/04/23	11/04/23	
	2	Python IDE	Lecture	11/04/23	11/04/23	
	3	Interacting with Python Programs	Lecture	13/04/23	13/04/23	
	4	Elements of Python	Lecture	13/04/23	13/04/23	
	5	Type Conversion.	Lecture	17/04/23	17/04/23	
	6	Basics: Expressions,	Lecture	18/04/23	18/04/23	
	7	Assignment Statement	Lecture	20/04/23	20/04/23	
	8	Arithmetic Operators	Lecture	21/04/23	21/04/23	
	9	Operator Precedence	Lecture	22/04/23	22/04/23	
	10	Boolean Expression.	Lecture	23/04/23	23/04/23	
	11	**Revision/Problem of UNIT-1**	Lecture	1/05/23	1/05/23	
	12	**UNIT -1 TEST**	Test	2/05/23	2/05/23	
Unit-2(08)	18	Conditionals: Conditional statement in Python	Lecture	3/05/23	3/05/23	
	19	if-else statement	Lecture	8/05/23	8/05/23	
	20	its working and execution	Lecture	8/05/23	8/05/23	
	21	Nested-if statement	Lecture	9/05/23	9/05/23	
	22	Elif statement in Python	Lecture	10/05/23	10/05/23	
	23	Expression Evaluation	Lecture	11/05/23	11/05/23	
	24	Float Representation	Lecture	12/05/23	12/05/23	
	25	Loops: Purpose and working of loops	Lecture	13/05/23	13/05/23	
	26	While loop including its working	Lecture	15/05/23	15/05/23	
	27	For Loop	Lecture	16/05/23	16/05/23	
	28	Nested Loop	Lecture	17/05/23	17/05/23	
	29	Break and Continue	Lecture	18/05/23	18/05/23	
	32	**Revision/Problem of UNIT-2**	Lecture	19/05/23	19/05/23	
	33	**UNIT - 2 TEST**	Test	20/05/23	20/05/23	
Unit-3(08)	34	Function: Parts of A Function	Lecture	22/05/23	22/05/23	
	35	Execution of A Function	Lecture	23/05/23	23/05/23	
	36	Keyword and Default Arguments	Lecture	24/05/23	24/05/23	
	37	Scope Rules	Lecture	25/05/23	25/05/23	
	38	Strings : Length of the string and perform Concatenation	Lecture	26/05/23	26/05/23	
	39	and Repeat operations in it. Indexing and Slicing of Strings.	Lecture	27/05/23	27/05/23	

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	40	Python Data Structure : Tuples , Unpacking Sequences , Lists , Mutable Sequences , List Comprehension , Sets , Dictionaries	Lecture	30|05|23	30|05|23	
	41	Higher Order Functions: Treat functions as first class Objects , Lambda Expressions	Lecture	31|05|23	31|05|23	
	42	**Revision/Problem of UNIT-3**	Lecture	1|06|23	1|06|23	
	43	**UNIT -3 TEST**	Test	2|06|23	2|06|23	
Unit-4(08)	44	Sieve of Eratosthenes: generate prime numbers with the help of an algorithm given by the Greek	Lecture	3|06|23	3|6|23	
	45	Mathematician named Eratosthenes	Lecture	5|06|23	5|6|23	
	46	whose algorithm is known as Sieve of Eratosthenes.	Lecture	12|06|23	12|6|23	
	47	File I/O : File input and output operations in Python Programming	Lecture	13|06|23	13|6|23	
	48	Exceptions and Assertions	Lecture	14|06|23	14|6|23	
	49	Modules : Introduction , Importing Modules ,	Lecture	15|06|23	15|6|23	
	50	Abstract Data Types : Abstract data types	Lecture	16|06|23	16|6|23	
	51	ADT interface in Python Programming	Lecture	17|06|23	17|6|23	
	52	Classes : Class definition and other	Lecture	19|06|23	19|06|23	
	53	operations in the classes , Special Methods	Lecture	20|06|23	20|06|23	
	54	(such as _init_, _str_, comparison methods and Arithmetic methods etc.)	Lecture	21|06|23	21|06|23	
	55	Class Example , Inheritance , Inheritance and OOP.	Lecture	22|06|23	22|06|23	
	56	**UNIT -4 TEST**	TEST	26|06|23	26|06|23	
Unit-5(08)	57	Iterators & Recursion,:	Lecture	28|06|23	28|06|23	
	58	: Recursive Fibonacci	Lecture	29|06|23	29|06|23	
	62	Tower Of Hanoi Search	Lecture	30|06|23	30|06|23	
	63	Simple Search and Estimating Search Time ,	Lecture	3|07|23	3|07|23	
	64	Binary Search and Estimating Binary Search Time	Lecture	4|07|23	4|07|23	
	65	Sorting & Merging:, , ,	Lecture	5|07|23	5|07|23	
	66	Selection Sort	Lecture	6|07|23	6|07|23	
	67	Merge List	Lecture	8|07|23	8|07|23	
	68	Higher Order Sort	Lecture	10|07|23	10|07|23	
	69	Merge Sort	Lecture	19|07|23	19|07|23	
	71	**UNIT – 5 TEST**	TEST	20|7|23	20|07|23	

Assistance Needed: 2

1) **All 5 Units Covered in Total 40 Lectures.**
2) **5 Lectures for Unit Tests.**
3) **5 Lectures for Assignment.**
4) **21 Lectures for Revision/Problem Solving/Extra Lecture.**

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Date: -

Signature of HOD: -

Signature of Faculty: -

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DR. K. N. Modi Foundation, Modinagar

Name of Faculty: - **Parbhat Gupta** Institute: - **Dr. KNMIET, Modinagar** Department: CS/IT
Subject &Code : - **CD KCS 552** Semester : - **Vth** Total Lecture : -10

ACADEMIC CURRICULUM COVERAGE PLAN

Lab No. (With No. of Periods Allotted)	Lab No.	Topics with Periods/Sessions	Methodology (Lab)	Date of Conduct		Deviation (if any)
				Planned Date	Actual Date	
10	1	Introduction of Compiler Programming	Lab	06/09 10/09	06/09 10/09	
	2	Implementation of LEXICAL ANALYZER for IF STATEMENT	Lab	13/09 17/09	13/09 17/09	
	3	Implementation of LEXICAL ANALYZER for ARITHMETIC EXPRESSION	Lab	20/09 24/09	20/09 —	
	4	Construction of NFA from REGULAR EXPRESSION	Lab	04/10 08/10	04/10 —	
	5	Construction of DFA from NFA	Lab	11/10 15/10	— 15/10	
	6	Implementation of SHIFT REDUCE PARSING ALGORITHM	Lab	01/11 05/11	01/11 05/11	
	7	Implementation of OPERATOR PRECEDENCE PARSER	Lab	25/11 26/11	25/11 —	
	8	Implementation of RECURSIVE DESCENT PARSER	Lab	25/11 26/11	25/11 —	
	9	Implementation of CODE OPTIMIZATION TECHNIQUES	Lab	02/12 03/12	— 03/12	
	10	Implementation of CODE GENERATOR	Lab	02/12 03/12	02/12 —	

1) All 10 Practical's Covered in Total 10 Labs.

Date:- **Signature of HOD: -** **Signature of Faculty: -**

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Lecture Plan

Lecture Schedule	Topics/Contents	Date (Planned)	Date (Actual)
Lecture 1	Importance of user Interface – definition, importance of 8 good design	6/9/22	6/9/22
Lecture 2	Benefits of good design	8/9/22	8/9/22
Lecture 3	A brief history of Screen design	9/9/22	9/9/22
Lecture 4	The graphical user interface – popularity of graphics	10/9/22	12/9/22
Lecture 5	The concept of direct manipulation,	13/9/22	13/9/22
Lecture 6	graphical system, Characteristics,	14/9/22	14/9/22
Lecture.7	Web user – Interface popularity, characteristics-	15/9/22	15/9/22
Lecture 8	Principles of user interface	17/9/22	17/9/22
Lecture 9	Human interaction with computers	19/9/22	19/9/22
Lecture 10	importance of 8 human characteristics	20/9/22	20/9/22
Lecture 11	Human consideration	21/9/22	21/9/22
Lecture 12	Human interaction speeds	22/9/22	22/9/22
Lecture 13	understanding business junction	27/9/22	27/9/22
Lecture 14	understanding business junction	28/9/22	28/9/22
Lecture 15	Screen Designing :Design goals	29/9/22	06/10/22
Lecture 16	Screen planning and purpose	06/10/22	06/10/22
Lecture 17	8 organizing screen elements,	13/10	13/10/22
Lecture 18	ordering of screen data and content – screen navigation and flow	14/10	14/10/22
Lecture 19	Visually pleasing composition	18/10	18/10/22
Lecture 20	amount of information , focus and emphasis	19/10	19/10/22
Lecture 21	presentation information simply and meaningfully	20/10	20/10/22

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Lecture 22	information retrieval on web	01/11/22	01/11/22
Lecture 23	statistical graphics	02/11/22	07/11/22
Lecture 24	Technological consideration in interface design	03/11/22	03/11/22
Lecture 25	New and Navigation schemes	04/11/22	04/11/22
Lecture 26	selection of window	04/11/22	04/11/22
Lecture 27	8 selection of devices based and	24/11/22	24/11/22
Lecture 28	screen based controls	25/11/22	25/11/22
Lecture 29	Components – text and messages, Icons and increases	25/11/22	25/11/22
Lecture 30	Multimedia, colors	29/11/22	29/11/22
Lecture 31	uses problems,	30/11/22	30/11/22
Lecture 32	choosing colors	30/11/22	30/11/22
Lecture 33	Specification methods, interface	02/12/22	02/12/22
Lecture 34	Building Tools	05/12/22	05/12/22
Lecture 35	8 Interaction Devices	05/12/22	05/12/22
Lecture 36	Keyboard and function key	06/12/22	06/12/22
Lecture 37	pointing devices	07/12/22	07/12/22
Lecture 38	speech recognition digitization and generation	07/12/22	07/12/22
Lecture 39	image and video displays	07/12/22	07/12/22
Lecture 40	drivers	08/12/22	08/12/22
Lecture 41	Assignment discussion class	08/12/22	08/12/22
Lecture 42	Assignment discussion class	09/12/22	09/12/22
Lecture 43	Assignment discussion class	09/12/22	09/12/22
Lecture 44	Previous year university question paper discussion	09/12/22	09/12/22
Lecture 45	Previous year university question paper discussion	09/12/22	09/12/22

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