

Autonomous Post Graduate College Accredited 'A' Grade by NAAC BHAGWANPUR, VARANASI-221005 (U.P.)

B.C.A. I Sem. ACADEMIC PLANNER 2025-26

BCA LECTURE PLAN SEMESTER – 1 2025-26

BCA-24-101: Fundamentals of Mathematics

Course Outcome:

- **CO 1: Define and illustrate the concepts related to Mathematics**
- CO 2: Make use of the knowledge of mathematics for examining various theorems
- CO 3: Determine the effectiveness of different theorems and construct effective solution for mathematical problems

DETAILED SYLLABUS				
Unit	Topic	Proposed Lecture		
I	DETERMINANTS: Definition, Minors, Cofactors, Properties of Determinants, MATRICES: Definition, Types of Matrices, Addition, Subtraction, Scalar Multiplication and Multiplication of Matrices, Adjoint, Inverse, Cramers Rule, System of linear equation.	30		
II	DIFFERENTIATION: Definitions: Constant, Variable and Functions, Derivative, Derivatives of Sum, Differences, Product & Quotients, Chain Rule, Derivatives of Composite Functions, Logarithmic Differentiation, Maxima & Minima	15		
III	INTEGRATION: Integral as Limit of Sum, Fundamental Theorem of Calculus (without proof.), Indefinite Integrals, Methods of Integration: Substitution, By Parts, Partial Fractions, Gamma and Beta Functions (definition).	15		
IV	3D COORDINATE GEOMETRY 3D Coordinate Geometry: Coordinates in Space, Direction Cosines, Angle Between Two Lines, Projection of Join of Two Points on a Plane, Equations of Plane, Straight Lines, Conditions for a line to lie on a plane, Conditions for Two Lines to be Coplanar, Shortest Distance Between Two Lines.	30		

- 1. B.S. Grewal, "Elementary Engineering Mathematics", 34th Ed., 1998.
- 2. Shanti Narayan, "Integral Calculus", S. Chand & Company, 1999
- 3. H.K. Dass, "Advanced Engineering Mathematics", S. Chand & Company, 9th Revised Edition, 2001.
- 4. Shanti Narayan, "Differential Calculus", S.Chand & Company, 1998.

Teacher Name: Abhishek Sharma

Course Name: Fundamentals of Mathematics Course Code: BCA-24-101

	Lecture Plan					
Month	UNIT	Week	No. of Planned Lecture	Topic		
		1 st				
	I	2 nd	4	Definition, Minors, Cofactors, Properties of Determinants, MATRICES: Definition, Types of Matrices, Addition, Subtraction,		
AUG	& II	3rd	5	Scalar Multiplication and Multiplication of Matrices, Adjoint,		
		4 th	6	Inverse, Cramers Rule, System of linear equation.		
		5 th	6	DIFFERENTIATION: Definitions: Constant, Variable and Functions,		
		1 st	5	Derivative, Derivatives of Sum, Differences, Product & Quotients,		
	III	2 nd	6	Chain Rule, Derivatives of Composite Functions		
SEP	111	3 rd	6	Logarithmic Differentiation, Maxima & Minima		
SEI	IV	4 th	6	INTEGRATION: Integral as Limit of Sum, Fundamental Theorem of Calculus (without proof.), Indefinite Integrals		
		5 th	0			
		1 st	1	Indefinite Integrals		
	17	2 nd	6	Methods of Integration: Substitution, By Parts		
ОСТ	V & VI	&		3 rd	5	Partial Fractions, Gamma and Beta Functions(definition).
			4 th	2	3D Coordinate Geometry Coordinates in Space, Direction Cosines, Angle Between Two Lines	
		5 th	4	Coordinates in Space, Direction Cosines		
		1 st	1	Angle Between Two Lines		
		2 nd	5	Projection of Join of Two Points on a Plane		
NOV	VI	3 rd	6	Equations of Plane, Straight Lines		
NUV	V I	4 th	6	Conditions for a line to lie on a plane, Conditions for Two Lines to be Coplanar		
		5 th	6	Shortest Distance Between Two Lines		
Total planned lecture: 86						

- 1. B.S. Grewal, "Elementary Engineering Mathematics", 34th Ed., 1998.
- 2. Shanti Narayan, "Integral Calculus", S. Chand & Company, 1999
- 3. H.K. Dass, "Advanced Engineering Mathematics", S. Chand & Company, 9th Revised Edition, 2001.
- 4. Shanti Narayan, "Differential Calculus", S.Chand & Company, 1998.

BCA-24-102: Fundamentals of Computer Application

Course Outcome:

- CO 1: Demonstrate the knowledge of the basic structure, components, features and generations of computers.
- CO 2: Compare and contrast features, functioning & types of operating system and computer networks.
- CO 2: Understanding the concept and implications of Number System.

	DETAILED SYLLABUS					
Unit	Topic	Proposed Lecture				
I	INTRODUCTION TO COMPUTER: Computer Definition, Characteristics of Computers, Evolution of Computers & its applications, Block diagram of computer, IT tools and their applications, Types of Computers, Basic Organization of a Digital Computer, Hardware and Software, Application Software, Systems Software, Utility Software, Open source and Proprietary Software.	20				
II	NUMBER SYSTEM: Representation of numbers and characters in computers. Binary, Hexadecimal, Octal, BCD, ASCII, EDCDIC and Gray codes, Conversion of bases, Number System Arithmetic's.	25				
Ш	OPERATING SYSTEM: Basics of Operating System, Functions of Operating System, Types of Operating System. Dos – History, Files and Directories, Internal and External Commands, Batch Files, Types of O.S. Overview of Windows and Linux Operating system and its User Interface and differences. PROGRAMMING LANGUAGE TOOLS: Assembler, Compiler, Interpreter, Linker and Loader	15				
IV	INTRODUCTION TO INTERNET AND WWW: Basic of Computer Networks, Local Area Network (LAN), Metropolitan area Network (MAN), Wide Area Network (WAN), Network Topology, Internet, Concept of Internet & WWW, Applications of Internet, Website Address and URL, Introduction to IP Address, ISP and Role of ISP, Internet Protocol, Modes of Connecting Internet (Hotspot, Wi-Fi, LAN Cable, Broadband, USB Tethering). EXPLORING THE INTERNET: Surfing, Popular Search Engines, Searching, Downloading, Printing.	30				

- 1. V. Rajaraman, Introduction to Information Technology, PHI Learning; 3rd edition, 2018
- 2. Pramod Kumar, Anuradha Tomar, R. Sharmila, "Emerging Technologies in Computing Theory, Practice, and Advances", Chapman and Hall / CRC, 1st Edition, 2021, eBook ISBN: 9781003121466.
- 3. "Emerging Information Technologies: Improving Decisions, Cooperation, and Infrastructure" by Kenneth
- E. Kendall

Teacher Name: Suman Mishra Tiwari

Course Name: Fundamentals of Computer Applications Course Code: BCA-24-101

				Lecture Plan
Month	UNIT	Week	No. of Planned Lecture	Topic
		1st	-	
		2 nd	-	
Aug	I & II	3 rd	3	INTRODUCTION TO COMPUTER: Computer Definition, Characteristics of Computers, Evolution of Computers & its applications,
		4 th	4	Block diagram of computer, IT tools and their applications, Types of Computers
		5 th	4	Basic Organization of a Digital Computer
		1st	3	Hardware and Software, Application Software, Systems Software, Utility Software, Open source and Proprietary Software.
SEP	III	2 nd	4	NUMBER SYSTEM: Representation of numbers and characters in computers., Binary, Hexadecimal Codes and conversions
	IV	3rd	4	Octal, BCD, ASCII, EDCDIC and Gray codes, Conversion of bases,
		4th	4	Number System Arithmetic's.
		5 th	-	Trained dystam in turnious si
		1 st	1	Number System Arithmetic's.
	V &	2 nd	4	OPERATING SYSTEM: Basics of Operating System, Functions of Operating System, Types of Operating System. Dos – History, Files and Directories,
ОСТ	VI	3rd	3	Internal and External Commands, Batch Files,
		4th	2	Types of O.S. Overview of Windows and Linux Operating system and its User Interface and differences.
		5 th	3	PROGRAMMING LANGUAGE TOOLS: Assembler, Compiler, Interpreter, Linker and Loader
		1st	1	INTRODUCTION TO INTERNET AND WWW: Basic of Computer Networks, Local Area Network (LAN), Metropolitan area Network (MAN), Wide Area Network (WAN), Network Topology,
NOV		2 nd	4	Internet, Concept of Internet & WWW, Applications of Internet, Website Address and URL
	VI	3rd	4	Introduction to IP Address, ISP and Role of ISP, Internet Protocol
		4 th	4	Modes of Connecting Internet (Hotspot, Wi-Fi, LAN Cable, Broadband, USB Tethering).
		5 th	4	EXPLORING THE INTERNET: Surfing, Popular Search Engines, Searching, Downloading, Printing.

- 1. V. Rajaraman, Introduction to Information Technology, PHI Learning; 3rd edition, 2018
- 2. Pramod Kumar, Anuradha Tomar, R. Sharmila, "Emerging Technologies in Computing Theory, Practice, and Advances", Chapman and Hall / CRC, 1st Edition, 2021, eBook ISBN: 9781003121466.
- 3. "Emerging Information Technologies: Improving Decisions, Cooperation, and Infrastructure" by Kenneth E. Kendall

BCA-24-103T: Programming in C

Course Outcome:

- **CO 1:** Apply the concept of procedural programming language using C programming
- **CO 2:** Plan and analyze the real-world problems using C programming concepts
- **CO 3:** Create the solution of the real-world problems and improve it as per industry standards

	DETAILED SYLLABUS	
Unit	Topic	Proposed Lecture
I	Overview of C: History and importance of C, Basic structure of C program, Comments, Concept of header files, Preprocessor directives: #include, #define. Constants, Variable and Data Types: Introduction, Character Set, C Tokens, Keywords and Identifiers, Constants, Variables, Data Types, Declaration of Variables, Assigning values to variables. Managing Input and Output Operations: Reading a Character, Writing a Character, Formatted Input, Formatted Output. Operators and Expressions: Introduction, Arithmetic Operators, Relational Operators, Logical Operators, Unary Operators, Binary Operators, Ternary Operator, Assignment Operators, Increment and Decrement Operators, Arithmetic Expressions, Evaluation of Expressions, Type Conversions in Expressions, Operator Precedence and Associativity. Decision making structures: If, If-else, Nested If-else, Switch-case statements, Difference between if-else switch-case. Loop Control structures: While loop, Do-while loop, for loop, Nested loop, Difference between while and do-while loop. Other statements: break, continue, goto, exit and return.	20
II	Arrays: One-dimensional Arrays, Declaration of One-dimensional Arrays, Initialization of One-dimensional Arrays, Example programs- Bubble sort, Selection sort, Linear search, Binary search, Two-dimensional Arrays, Declaration of Two-dimensional Arrays, Initialization of Two-dimensional Arrays, Example programs-Matrix Addition/Multiplication, Transpose of a matrix., Memory representation of array [Row Major, Column Major] Character Arrays and Strings: Declaring and Initializing String Variables, Reading Strings from Terminal, Writing Strings to Screen, Arithmetic Operations on Characters, String-handling Functions, Example Programs (with and without using built-in string functions) User-defined Functions: Introduction, Defining Function, Function prototyping, Function Calls (call by value and call by reference), Passing Arrays to Functions, Recursion. Storage Class: The Scope, Visibility and Lifetime of variables.	15
III	Pointers: Introduction, Defining Pointer variables, Initialization of Pointer variables, accessing a Variable through its Pointer, Pointer of pointer, Arithmetic operation on pointer variable, Array and pointer, Pointer to function, Command line arguments, Dynamic memory allocation. Structures: Introduction, defining a structure, defining structure variables, accessing structure members, array of structures, pointer of structure. Union: Introduction, defining union, defining union variables, accessing union members, Difference between structure and union.	10

IV	Bitwise Operators: Bitwise operators, Bit masking, bit field.	15
	File handling: Introduction, Operations on file, Opening modes of files,	
	Standard function: fopen(), fclose(), feof(), Handling text files: fgetc(), fputc(),	
	fscanf(), fprintf(), fgets(),fputs(), Handling binary files: fread(), fwrite(), Direct	
	access: fseek(),ftell(), fewind().	

- Let us C-Yashwant Kanetkar.
- Programming in C -Balguruswamy
- The C programming Language Dennis Ritchie
- $\bullet \quad \textit{Structured programming approach using C-Forouzah \& \textit{Ceilberg Thomson learning Publication}.}$

LECTURE PLAN (2025-26) BCA-I Semester, Sections A, B

Course Name: Programming in C Course Code: BCA-24-103T

Teacher Name: Daya Shankar Singh

August August	Month	Week	No. of Planned Lecture	Topic
August August				
August August		2 nd		
#include, #define. Constants, Variable and Data Types: Introduction, Character, Constants, Variable and Data Types: Introduction, Character, Constants, Variables. ##include, #define. Constants, Variable and Data Types: Introduction, Character, Constants, Variables. ##include, #define. Constants, Variable and Data Types: Introduction, Character, Constants, Variables. ##include, #define. Constants, Variable and Data Types: Introduction, Character, Constants, Variables. ##include, #define. Constants, Variables, Keywords and Identifiers, Constants, Variables, Constants, Variables, Constants, Variables, Constants, Variables, Constants, Variables, Assigning values variables. ##include, #define. Constants, Variable and Data Types: Introduction, Character, Formatted Identifiers, Constants, Variables, Assigning values variables. Assigning values variables. Assigning values variables. Assigning values variables. Introduction, Arithmetic ##include, Yariables, Reading Strings from Terminal, Wriables. ##include, Yariables, Reading Strings from Terminal, Wriables. ##include, Yariables, Reading Strings from Terminal, Wriables. ##include, Yariables, Assigning values variables. Assigning values variables. ##include, Yariables, Reading Strings from Terminal, Wriables. ##include, Yariables, Reading Strings from Terminal, Wriables. ##include, Yariables, Assigning values. ##include, Yariables, Assigning from Terminal, Wriables. ##include, Yariables, Assigning		3 rd	3	Overview of C: History and importance of C, Basic structure of
Character, Writing a Character, Formatted Input, Formatted Output. Operators and Expressions: Introduction, Arithme Operators, Relational Operators, Logical Operators, Un Operators, Binary Operators, Ternary Operators, Assignm Operators, Increment and Decrement Operators, Arithme Expressions, Explusation of Expressions, Type Conversions Expressions, Operator Precedence and Associativity. Decision making structures: If, If-else, Nested If-else, Swit case statements, Difference between if-else switch-case. Loop Control structures: While loop, Do-while loop, for loop Nested loop, Difference between while and do-while loop. Other statements: break, continue, goto, exit and return. UNIT-II Arrays: One-dimensional Arrays, Declaration of Oddimensional Arrays, Initialization of One-dimensional Arrays, Example programs-Bubble sort, Selection sort, Linear sear Example programs-Bubble sort, Selection sort, Linear sear Example programs-Matrix Addition/Multiplicated Transpose of a matrix., Memory representation of array [Imajor, Column Major] Character Arrays and Strings: Declaring and Initiality String Variables, Reading Strings from Terminal, Wristings of Screen, Arithmetic	August	4 th	4	Constants, Variable and Data Types: Introduction, Character Set, C Tokens, Keywords and Identifiers, Constants, Variables, Data Types, Declaration of Variables, Assigning values to
September September September Case		5 th	4	Character, Writing a Character, Formatted Input, Formatted Output. Operators and Expressions: Introduction, Arithmetic Operators, Relational Operators, Logical Operators, Unary Operators, Binary Operators, Ternary Operator, Assignment Operators, Increment and Decrement Operators, Arithmetic Expressions, Evaluation of Expressions, Type Conversions in
September 4 Nested loop, Difference between while and do-while loop. Other statements: break, continue, goto, exit and return. UNIT-II Arrays: One-dimensional Arrays, Declaration of Oddimensional Arrays, Initialization of One-dimensional Arrays Example programs- Bubble sort, Selection sort, Linear sear Binary search, Two-dimensional Arrays, Declaration of Two-dimensional Arrays, Example programs-Matrix Addition/Multiplicat Transpose of a matrix., Memory representation of array [IMajor, Column Major] Character Arrays and Strings: Declaring and Initiality String Variables, Reading Strings from Terminal, Writspring Strings to Screen, Arithmetic		1 st	3	Decision making structures: If, If-else, Nested If-else, Switch-case statements, Difference between if-else switch-case.
September Arrays: One-dimensional Arrays, Declaration of O dimensional Arrays, Initialization of One-dimensional Arrays Example programs- Bubble sort, Selection sort, Linear sear Binary search, Two-dimensional Arrays, Declaration of Two-dimensional Arrays, Example programs-Matrix Addition/Multiplicat Transpose of a matrix., Memory representation of array [I Major, Column Major] Character Arrays and Strings: Declaring and Initiality String Variables, Reading Strings from Terminal, Write Strings to Screen, Arithmetic		2 nd	4	
String Variables, Reading Strings from Terminal, Wri 4th 4 Strings to Screen, Arithmetic	September	3 rd	4	Arrays: One-dimensional Arrays, Declaration of One-dimensional Arrays, Initialization of One-dimensional Arrays, Example programs- Bubble sort, Selection sort, Linear search, Binary search, Two-dimensional Arrays, Declaration of Two-dimensional Arrays, Initialization of Two-dimensional Arrays, Example programs-Matrix Addition/Multiplication, Transpose of a matrix., Memory representation of array [Row
		_		Character Arrays and Strings: Declaring and Initializing String Variables, Reading Strings from Terminal, Writing Strings to Screen, Arithmetic Operations on Characters, String-handling Functions, Example Programs (with and without using built-in string functions)

	1 st	0			
	2 nd	4	User-defined Functions: Introduction, Defining Function, Function prototyping, Function Calls (call by value and call by reference), Passing Arrays to Functions, Recursion. Storage Class: The Scope, Visibility and Lifetime of variables.		
October	3 rd	3	UNIT-III Pointers: Introduction, Defining Pointer variables, Initialization of Pointer variables, accessing a Variable through its Pointer, Pointer of pointer, Arithmetic operation on pointer variable,		
	4 th	2	Array and pointer, Pointer to function, Command line arguments, Dynamic memory allocation.		
	5 th	3	do		
	1 st	1	Structures: Introduction, defining a structure, defining structure variables, accessing structure members, array of structures, pointer of structure. Union: Introduction, defining union, defining union variables, accessing union members, Difference between structure and union.		
	2 nd	4	do		
November	3 rd	4	UNIT-IV Bitwise Operators: Bitwise operators, Bit masking, bit field.		
	4 th	4	File handling: Introduction, Operations on file, Opening modes of files, Standard function: fopen(), fclose(), feof(), Handling text files: fgetc(), fputc(), fscanf(), fprintf(), fgets(),fputs(),		
	5 th	4	Handling binary files: fread(), fwrite(), Direct access: fseek(),ftell(), fewind().		

Total: 55

- Let us C -Yashwant Kanetkar.
- Programming in C -Balguruswamy
- The C programming Language Dennis Ritchie
- Structured programming approach using C-Forouzah & Ceilberg Thomson learning Publication.

BCA-24-103P: Programming in C Lab

Course Outcome:

- **CO 1:** Apply the concept of procedural programming language using C programming
- **CO 2:** Plan and analyse the real-world problems using C programming concepts
- **CO 3:** Create the solution of the real-world problems and improve it as per industry standards

Practical Exercises:

- 1. Write a program to calculate simple interest.
- 2. Write a program to swap the value of two variables.
- 3. Write a program to swap the value of two variables without taking any third variable.
- 4. Write a program to check the leap year.
- 5. Write a program to check given number is negative of positive.
- 6. Write a program to check given number is odd or even.
- 7. Write a program to check greatest number from given three numbers.
- 8. Write a program to print month name of a given month number.
- 9. Write a program to check given character is vowel, consonant, digits or special character.
- 10. Write a program to print the table of a given number.
- 11. Write a program to print factorial of a given number.
- 12. Write a program to display any digit(n) from 0-9 represented as a "7 segment display".

13. Write a program to print the following format:-

	ite a progra	in to print the ronowing for	· · · · · ·
a.	1	b.	1234
	12		123
	123		12
	1234		1
14. a.	*	b.	****
	**		***
	***		**
	****		*
15. a.	4	b.	4321
	34		432
	234		43
	1234		4
16. a.	4	b.	*
	43		***
	432		****
	4321		*****
17. a.	1	b.	Α
	121		ABA
	12321		ABCBA
	1234321		ABCDCBA
	•		

- 18. Write a program to check given number is prime or not.
- 19. Write a program to print all prime numbers from 1 to 500
- 20. Write a program to print Fibonacci series.
- 21. Write a program to calculate the compound interest.
- 22. Write a program to print the sum of each digits of a given number.

- 23. Write a program to reverse the digits of a given number.
- 24. Write a program to check given number is palindrome or not.
- 25. Write a program to print the sum of first and last digits of a given number.
- 26. Write a program to print the result of a^b for the given value of variable a and b.
- 27. Write a program to check the given number is perfect number of not.
- 28. Write a program to check the given number is Armstrong or not.
- 29. Write a program to convert decimal number to binary number
- 30. Write a program to print Pascal triangle.
- 31. Write a program to print the GCD(HCF) and LCM of two given numbers.
- 32. Write a program that prompts user to input value in an array of integer type and print the reverse of that array.
- 33. Write a program to search a value in an array and print its position (index) if it is found otherwise print -1.
- 34. Write a program to find greatest number in a given array.
- 35. Write a program to find the position of a character in a string.
- 36. Write a function to convert a string in small case.
- 37. Write a function to convert a string in title case.
- 38. Write a program that prompts user to input a string and find the following in that string:-
 - Number of vowels.
 - Number of consonants.
 - Number of digits.
 - Number of special characters.
- 39. Write a program that prompts user to input a string and find number of words in the string. Words can be separated by more than one spaces and any other punctuation marks.
- 40. Write a function to sort an array using bubble sort technique.
- 41. Write a function to sort an array using selection sort technique.
- 42. Write a program to print transpose of a matrix.
- 43. Write a program tow add two matrices.
- 44. Write a program tow multiply two matrices.
- 45. Write a program to print the sum of each row and each column of a given matrix.
- 46. How array are represented in memory? Describe the row major and column major representation of a matrix.
- 47. Write a program to find the length of a string.
- 48. Write a function to copy a string in other string.
- 49. Write a function to concatenate a string in another string.
- 50. Write a program to store and print the records of students with fields RegNo, Name, and marks.
- 51. Write a program to set a bit at a third bit position of a character type variable.
- 52. Write a program to unset a bit at a third bit position of a character type variable.
- 53. Write a program to find a bit at a third bit position of a character type variable.
- 54. Write a program to print all the bits of a character type variable.
- 55. Write a program to print the contents of a file.
- 56. White a program to copy the contents of a file to another file.
- 57. Write a program to change the tenth character of the contents of a file.
- 58. Write a program to print the sum of all the numbers coming from the command line.

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LECTURE PLAN (2025-26) BCA-I Semester, Section-A

Teacher Name: Daya Shankar Singh

Month	Week	No. of Planned Lecture	Topic
	1 st		
	2 nd		
	3 rd	4	UNIT-I Steps to write program, Some basic programs.
August	4 th	4	Programs related to defining variables. Input value, print value of variables. Programs using arithmetical operators, Assignment operator.
	5 th	4	<pre>Programs using printf(), scanf() functions. Programs using getch(), getchar(), putchar() functions, Programs using gets(), puts() functions</pre>
	1 st	4	Programs using If, If-else, Nested If-else, switchcase statements.
	2 nd	4	Programs using Loop Control structures. Programs using break, continue, goto, exit statements. Programs related to # directive
September	3 rd	3	UNIT-II Programs related to array, Programs related to searching and sorting,
	4 th	4	Programs related to string handling
	5 th	0	
	1 st	0	
	2 nd	4	Programs related to : Function definition declaration and passing parameter. Programs related to storage class
October	3 rd	4	UNIT-III Programs related to pointer, dynamic memory allocation, Programs related to access the element by base address of matrices, Programs related to pointer of function
	4 th	0	
	5 th	4	Programs related to structure
	1 st	1	Programs related to union
	2 nd	3	do
November	3 rd	4	UNIT-IV Programs related to bitwise operators
	4 th	4	Programs related to file handling
	5 th	4	do

Total: 55

LECTURE PLAN (2025-26) BCA-I Semester, Section-B

Course Name: Programming in C -Lab Course Code: BCA-24-103P

Teacher Name: Daya Shankar Singh

Month	Week	No. of Planned Lecture	Topic
	1 st		
	2 nd		
	3 rd	4	UNIT-I Steps to write program, Some basic programs.
August	4 th	4	Programs related to defining variables. Input value, print value of variables. Programs using arithmetical operators, Assignment operator.
	5 th	4	Programs using printf(), scanf() functions. Programs using getch(), getchar(), putchar() functions, Programs using gets(), puts() functions
	1 st	4	Programs using If, If-else, Nested If-else, switchcase statements.
	2 nd	4	Programs using Loop Control structures. Programs using break, continue, goto, exit statements. Programs related to # directive
September	3 rd	3	UNIT-II Programs related to array, Programs related to searching and sorting,
	4 th	4	Programs related to string handling
	5 th	0	
	1 st	0	
	2 nd	4	Programs related to : Function definition declaration and passing parameter. Programs related to storage class
October	3 rd	4	UNIT-III Programs related to pointer, dynamic memory allocation, Programs related to access the element by base address of matrices, Programs related to pointer of function
	4 th	0	
	5 th	4	Programs related to structure
	1 st	1	Programs related to union
	2 nd	3	do
November	3 rd	4	UNIT-IV Programs related to bitwise operators
	4 th	4	Programs related to file handling
	5 th	4	do

Total: 55

BCA-24-104ME1: Principles of management

Course Outcome:

- CO 1: Describe primary features, processes and principles of management.
- CO 2: Explain functions of management in terms of planning, decision making and organizing.
- CO 3: Illustrate key factors of leadership skill in directing and controlling business resources and processes

	DETAILED SYLLABUS				
Unit	Topic	Proposed			
		Lecture			
I	Management: Need, Scope, Meaning and Definition. The process of Management, nature & purpose, importance & Functions, Management as Art, Science & Profession-Management as social System Concepts of management-Administration-Organization, Management Skills, Levels of Management. Development of Management thought F.W. Taylor and Henry Fayol, Horothorne Studies, Qualities of an Efficient Management.	15			
II	Functions of Management: Part-I Planning: Meaning and Importance, Planning Process, Decision making – Meaning, Importance and Process. Organizing: Meaning and Importance, Process of Organization, Delegation of Authority Meaning and Importance, Centralization versus Decentralization. Staffing: Meaning and Importance of staffing. Process of Staffing.	15			
III	Functions of Management: Part-II Directing: Concept, Techniques of directing and supervision. Motivation: Concept, Need for motivation. Theories of motivation. Leadership: Concept and Importance; Leadership Styles. Communication and its types. Concept of Control: Preventive and corrective control. Control Techniques. Major Techniques of control.	15			
IV	Directing & Controlling: Motivation–Meaning, Importance, need. Theories of Motivation, Leadership–meaning, need and importance, leadership style, Qualities of effective leader, principles of directing, Basic control process, Different control Techniques.	15			

- 1. Essential of Management Horold Koontz and Iteinz Weibrich- McGraw-Hill's International
- 2. Management Theory & Practice J.N.Chandan
- 3. Essential of Business Administration K. Aswathapa, Himalaya Publishing House
- 4. Principles & practice of management Dr. L.M.Prasad, Sultan Chand & Sons New Delhi
- 5. Business Organization & Management Dr. Y.K.Bhushan
- 6. Management: Concept and Strategies by J.S. Chandan, Vikas Publishing
- 7. Principles of Management, By Tripathi, Reddy Tata McGraw Hill
- 8. Business organization and Management by Talloo, Tata McGraw Hill
- 9.Business Environment and Policy A book on Strategic Management/ Corporate Planning by Francis Cherunilam Himalaya Publishing House 2001 Edition

Course Name: Principles of Management Course Code: BCA-24-104ME1

Teacher Name: Dr. Sanaya Mehrotra

	Lecture Plan						
Month	Unit	Week	No. of Planned Lectures	Topics			
	I & II	3 rd	3	Need, Scope, Meaning and Definition. The process of management, Nature & purpose, Importance & Functions. Management as Art, Science & Profession; Management as social System.			
Aug		4 th	1	Concepts of management, Administration-Organization, Management Skills, Levels of Management. Development of Management thought- F. W. Taylor and Henri Fayol.			
		5 th	4	Hawthorne Studies, Qualities of an Efficient Management. Functions of Management: Part-I Planning – Meaning & Importance, Planning Process.			
	II & III	1 st	3	Decision Making- Meaning, Importance and Process.			
		2 nd	4	Organizing: Meaning and Importance, Process of Organization; Delegation of authority – Meaning and Importance. Centralization versus Decentralization.			
Sept		3rd	3	Staffing: Meaning and Importance of Staffing, Process of Staffing. Functions of Management: Part-II Directing: Concept.			
		4 th	4	Techniques of directing and supervision. Motivation: Concept, Need for motivation. Theories of motivation.			
		5 th	0	-			
	III	1 st	1	Leadership: Concept.			
		2 nd	4	Importance of Leadership; Leadership styles.			
Oct		3rd	3	Functions of Leader.			
		4 th	2	Communication and its types.			
		5 th	3	Controlling: Meaning, Need and Nature.			
	III & IV	1st	1	Importance of Controlling.			
		2 nd	3	Process & Techniques of Controlling.			
Nov		3rd	4	Coordination: Need and Importance.			
		4 th	4	Total Quality Management			
		5 th	4	Revision of all topics.			
Total Plann	otal Planned Lectures: 51						

- 1. Essential of Management Horold Koontz and Iteinz Weibrich- McGraw-Hill's International
- 2. Management Theory & Practice J.N.Chandan
- 3. Essential of Business Administration K.Aswathapa, Himalaya Publishing House
- 4. Principles & practice of management Dr. L.M.Prasad,, Sultan Chand & Sons New Delhi
- 5. Business Organization & Management Dr. Y.K.Bhushan
- 6. Management: Concept and Strategies by J.S. Chandan, Vikas Publishing
- 7. Principles of Management, By Tripathi, Reddy Tata McGraw Hill
- 8. Business organization and Management by Talloo, Tata McGraw Hill
- 9. Business Environment and Policy A book on Strategic Management/ Corporate Planning by Francis Cherunilam Himalaya Publishing House 2001 Edition

BCA-24-105VC: Office Automation

Course Outcome:

- CO 1: Effectively use office automation tools for document creation, presentation, and data analysis.
- CO 2: Demonstrate effective communication and collaboration skills using office automation tools.
- CO 2: Apply advanced features of office software to optimize office tasks and workflows.
- CO 3: To analyze data using excel functions and visualize data using excel charts.

DETAILED SYLLABUS					
Unit	Topic	Proposed			
		Lecture			
I	INTRODUCTION TO OFFICE AUTOMATION:	10			
	Overview of office automation and its benefits, Office Suite applications and				
	their features. Ethical and Legal Considerations in Office Automation.				
II	WORD PROCESSING:	10			
	Word processing: Formatting, Styles, Bullets & Numbering, Pages, Tables,				
	Illustration, Links, Header & Footer, Design Formatting, References, Mail				
	Merge, Review & View.				
III	SPREADSHEET:	15			
	Spreadsheets: Working & Formatting Spreadsheet, Conditional Formatting,				
	Styles, Charts. Sort & Filter, Queries & Connection, Get & Transform Data,				
	Formulas, Functions. Data Tools, What-if-Analysis, Templates, and Document				
	Automation, Collaboration Tools: Track Changes and Comments, Protect &				
	Locking sheet.				
IV	PRESENTATION TOOLS AND EMAIL MANAGEMENT:	10			
	Creating and delivering presentations, Draw & Design, Transition &				
	Animation, Recording, creating video. Email and Calendaring: Managing				
	emails and appointments				

- 1. Introduction to Information Technology Alexis Leon, Mathews Leon, and Leena Leon, Vijay Nicole Imprints Pvt. Ltd., 2013.
- 2. "Office 2019 All-in-One for Dummies" by Peter Weverka.
- 3. "Microsoft Office 365 for Dummies" by Wallace Wang
- 4. "Teach Yourself VISUALLY Office 2019" by Paul McFedries.

Teacher Name: Ms. Anita Shah

Lecture Plan								
			No. of	ACCUAL O A AMAA				
Month	UNIT	Week	Planned	Topic				
1-1011011	0.111		Lecture					
A U G U S	I	1 st	-	Overview of office automation and its benefits Office				
				Suite applications and their features				
		2 nd	2	Ethical and Legal Considerations in Office Automation. Introduction of Word processing				
		3 rd	3	Tabs, Ribbon, Home Tab with Formatting, Styles, Bullets & Numbering				
		4 th	3	Insert Tab				
		5 th	3	Pages, Tables, Illustration, Links, Header & Footer, Design Formatting				
S E	II	1 st	3	Layout Tab, References, Mail Merge				
P		2 nd	3	Review & View				
T		3rd	2	Spreadsheets: Working & Formatting Spreadsheet				
M B		4 th	3	Conditional Formatting, Styles, Charts. Sort & Filter, Queries & Connection, Get & Transform Data				
E R		5 th	-	Formulas				
	III	1 st						
		2 nd	3	Functions,				
0		3 rd	3					
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		4 th	-					
T O B E R		5 th	3	Functions,				
N	IV	2 nd	2	Data Tools, What-if-Analysis				
O V E		3rd	3	Templates, and Document Automation, Collaboration Tools: Track Changes and Comments				
M B		4 th	3	, Protect & Locking sheet. Creating and delivering presentations, Draw & Design, Transition & Animation,				
E R		5 th	3	Recording, creating video. Email and Calendaring: Managing emails and appointments				
Total Classes		Planned: 42						

- 1. Introduction to Information Technology Alexis Leon, Mathews Leon, and Leena Leon, Vijay Nicole Imprints Pvt. Ltd., 2013.
- 2. "Office 2019 All-in-One for Dummies" by Peter Weverka.
- 3. "Microsoft Office 365 for Dummies" by Wallace Wang
- 4. "Teach Yourself VISUALLY Office 2019" by Paul McFedries.