LESSON PLANS
BCA (2025-2026)

SEMESTER-I

Institute of Management & Technology, Faridabad

Department of Computer Applications(BCA)

Lecture Plan

COURSE:	Mathematics Foundation to Computer Science - I	**CODE:**	**25BCA401DS01**
CLASS:	BCA 1st Sem	**ACADEMIC YEAR:**	**2025-26**
FACULTY:	Ms. Anjali Bist		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
UNIT-I				
1	Sets: Definition, Representation of sets	T3,R4	1	Chalk & Talk
2	Types of sets, Subset, Power Set	T3,R4	1	Chalk & Talk
3	Set Operations & their properties, Venn Diagrams	T3,R4	2	PPT
4	Cartesian Products and it's properties	T3,R4	1	Chalk & Talk
5	Relation on Sets, Types & Properties of Relations, Inverse Relation	T3,R4	1	Chalk & Talk
6	Reflexive, Symmetric & Transitive Relation, Equivalence Relation	T3,R4	2	Chalk & Talk
7	Partition on set, Closures of Relations, Warshall's Algorithm	T3,R4	1	Chalk & Talk
8	Functions defination, domain, codomain & range of a function, Composition of functions	T3,R4	2	Chalk & Talk
9	One-one, many-one, Onto function	T3,R4	1	PPT
10	Bijective function, Inverse of a function	T3,R4	1	Chalk & Talk
11	Some basic functions: exponential, logarithmic, polynomial & constant function	T3,R4	1	PPT
UNIT- II				
12	Basics of counting, Pigeonhole principal	T3, R2	1	Chalk & Talk
13	Permutation & Combination	T3, R2	2	Chalk & Talk
14	Binomial Coefficient, Binomial Theorem	T3, R2	2	Chalk & Talk
15	Recurrence relation introduction and its examples	T3, R2	1	Chalk & Talk
16	Linear-non Linear, Homogenous- non homogeneous Recurrence relation	T3, R2	1	Chalk & Talk

17	Solution of linear recurrence relation with constant coefficient	T3, R2	2	Chalk & Talk
UNIT- III				
18	Graphs: Introduction & basic terminologies	T1,T3, R2	2	PPT
19	Types of graphs, Subgraph, Path & cycle	T1,T3, R2	1	Chalk & Talk
20	Complete Graph, Regular Graph, digraph, weighted graph, Cyclic graph	T1,T3, R2	1	PPT
21	Euler & Hamilton path & graphs	T1,T3, R2	1	Chalk & Talk
18	Connected & disconnected graph, Planar graphs	T1,T3, R2	1	Chalk & Talk
19	Trees: Introduction & basic terminologies	T3, R3	2	Chalk & Talk
20	Subtree, Spanning subtree, Binary Tree	T3, R3	1	Chalk & Talk
21	Tree Traversal: Post, Pre, In- order traversal	T3, R3	1	Chalk & Talk
UNIT- IV				
22	Matrix: Representation & types of matrix	T2, R1	2	Chalk & Talk
23	Addition & Subtraction of Matrices	T2, R1	1	Chalk & Talk
24	Scalar multiplication & Matrix Multiplication	T2, R1	1	Chalk & Talk
25	Transpose of a matrix, symmetric & skew-symmetric matrix	T2, R1	1	Chalk & Talk
26	Determinant of matrix	T2, R1	1	Chalk & Talk
27	Minor & cofactor matrix	T2, R1	1	Chalk & Talk
28	Adjoint & inverse of a matrix	T2, R1	1	Chalk & Talk
29	Solution of simultaneous linear equations by matrix method & Cramer's Rule	T2, R1	2	Chalk & Talk
30	Rank of a matrix, Eigenvalues & Eigenvectors, Cayley Hamilton Theorem	T2, R1	2	Chalk & Talk

Total Lectures: 45

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. **TEXT BOOKS:**

T1: Deo Narsingh, Graph Theory with Application t o Engineering and Computer Science
T2: Vasishtha A. R. and Vasishtha A. K., Matrices, Krishna Prakashan, 2022
T3: Kolman B., Busby R. and Ross S., Discrete Mathematical Structures, 6th Edition, Pearson Education, 2015.

B. **REFERENCE BOOKS:**

R1: Schaum's Outline of Linear Algebra (6th Edition), Seymour Lipschutz & Marc Lipson.

R2: Discrete Mathematics and Its Applications by Kenneth H. Rosen
R3: Discrete Mathematics by Richard Johnsonbaugh.
R4: R.D. Sharma – Mathematics for Class 11.

C. GOOGLE CLASSROOM LINK

https://classroom.google.com/c/ODAxNzMwNzUyMjM5?cjc=vldrogv2

DIGITAL CONTENT:

W1: https://youtube.com/playlist?list=PLEHGYFbPuuMEMCD-8hwgnsZS0xKd8ydie&si=JMCIz_XnA9wPuQhi

W2: https://youtube.com/playlist?list=PLEHGYFbPuuMGVtDJnIjVoq29eGqh7F6dE&si=RFruGC2swZQqoFkS

Institute of Management & Technology,Faridabad

Department of Computer Applications(BCA)

Lecture Plan

COURSE:	**Problem Solving Techniques**	**CODE:**	**25BCA401SEC01**
CLASS:	**BCA 1st Sem**	**ACADEMIC YEAR:**	**2025-26**
FACULTY:	**Ms.Kanishka Setia**		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
1	Problem & Problem Instance, Generalization and special cases	T2,R1	1	Chalk & Talk
2	Types of computational problems, classification and analysis of problems	T2,R1	3	PPT
3	Analysis of algorithms, Role of data structure in problem solving	T2,R1	2	Chalk & Talk
4	Problem solving steps, breaking the problem	T2,R1	1	PPT
5	Input output specification and validation	T2,R1	1	Chalk & Talk
6	Practical Lab based on above topics	T2,R1	4	Chalk & Talk
UNIT-II				
7	Introduction to Psuedocode,Algorithm & Flowchart, Definition and characteristics of algorithm	T1,R1	2	Chalk & Talk
8	History,Importance of C & Empty C Programs	T1,R1	1	Chalk & Talk

9	Basic Structure of C Program & C Tokens	T1,R1	2	PPT
10	Data Types & Variables	T1,R1	2	Chalk & Talk
11	Printf() and Scanf() function	T1,R1,W1	1	Chalk & Talk
12	Arithmetic, Relational and logical operators	T1,W1,W3	2	PPT
13	Structured programming concepts: sequence, selection and iteration	T1,R1	2	Chalk & Talk
14	Entry & Exit loops, Counter controlled and Sentinel loops	T1,R1	1	Chalk & Talk
16	Decision making with If & If-else statement	T1,R1	1	Chalk & Talk
17	Nested IF statement & ELSE-IF ladder statement	T1,T2	2	Chalk & Talk
18	For, while and do-while loops	T1,R1,W2	1	PPT
19	Genreating AP, GP, Fibonacci and other sequence, Trigonometric functions, taylor series	T2,R2	2	Chalk & Talk
20	Representation of integers-1's complement, 2's complement, ASCII code	T2,R2	1	Chalk & Talk
21	Practical Lab based on above topics	T2,R1	4	Chalk & Talk
UNIT-III				
22	Problems on numbers-Palindrome, Prime number, Amicable number, Armstrong number, Factorial	T2,R2	3	Chalk & Talk
23	Switch Case, Increment Decrement Operator	T1, R!	1	Chalk & Talk
24	Practical Lab based on above topics	T2,R1	4	Chalk & Talk
UNIT-IV				
25	Introduction to modular programming, top down and bottom up approach	T1,R1,W4	1	Chalk & Talk
26	. User define functions-declaration,calling & defining, Recursion	T1,R1,W4	2	Chalk &Talk
27	Arrays-Initialization & Processing	T1,R1	2	Chalk & Talk
28	Reading and writing of arrays, String Functions	T1	1	Chalk & Talk
29	Maximum, minimum, sum, average, median	T1	1	Chalk & Talk
30	Sequential and binary search, matrix operations	T1,R1	2	PPT
31	Practical Lab based on above topics	T2, R1	4	Chalk & Talk

Total Lectures: 45 Labs: 16

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

□ CHALK & TALK	□ STUD. ASSIGNMENT	□ WEB RESOURCES

□ LCD/SMART BOARDS	□ STUD. SEMINARS	□ ADD-ON COURSES

References

A. TEXT BOOKS:

T1 Programming in ANSI C By E.Balagurusamy
T2 AICTE's Programming for problem solving, Khanna book publishing

B. REFERENCE BOOKS:

R1 Let us C By Yashwant Kanetkar
R2 Brian W. Kernighan and Dennis Ritchie, The C Programming Language, 2nd edition, Pearson, 2015.

C. GOOGLE CLASSROOM:

https://classroom.google.com/c/NzA4OTkxNzA3MzA3?cjc=km2toah

https://classroom.google.com/c/ODAwNDY4MDg4Nzc2?cjc=fc66zxw4 (specialization Data Science)

DIGITAL CONTENT:

W1. https://www.unf.edu/~wkloster/2220/ppts/cprogramming_tutorial.pdf
W2. https://www.w3schools.com/c/index.php
W3 https://www.slideshare.net/slideshow/operators-in-c-programming/34939571
W4 https://www.slideshare.net/slideshow/functions-in-c-language/112466447

Institute of Management & Technology,Faridabad

Department of Computer Applications(BCA)

Lecture Plan

COURSE:	**Computer Architecture**	**CODE:**	**25BCA401DS02**
CLASS:	**BCA 1st Sem**	**ACADEMIC YEAR:**	**2025-26**
FACULTY:	**Dr. Rekha Mittal**		

S. No.	Topic Name	Reference/ Text Book/ Web	No. Of Lecture	Delivery Method

		(R/T/W)		
UNIT-I				
1	Introduction to Digital Signals & Digital Logic, Digital Computer	T1	2	Chalk & Talk
2	Von Neuman Architecture, Boolean Laws & Theorems	T1	1	Chalk & Talk
3	K-Map, Simplification, SOP,POS	T1	4	Chalk & Talk
4	Number System ,Conversions and Binary Arithmetic	T1	2	Chalk & Talk
5	Addition and Subtraction of BCD, Octal and Hexadecimal Arithmetic	T1	1	Chalk & Talk
6	Binary Codes,Decimal Codes,Error detecting and correcting codes, ASCII, EBCDIC,Excess-3 and Gray Code	T1	1	Chalk & Talk
7	LAB Based on the Above topics	T1	8	H/W, S/W Tools
UNIT-II				
8	Combinational Ciruits: Half Adder,Full Adder, Subtractor	T1,R1	2	Chalk & Talk
9	Decoder ,Encoder, Multiplexer, Demultiplexer	T1,R1	2	Chalk & Talk
10	Sequential Cuircuit : S-R,D, JK, T flipflop	T1,T2	2	Chalk & Talk
11	Register : 4 bit register with Parallel load,Shift Register, 4 bit synchronous and asynchronous counters	T1,R1	3	Chalk & Talk
12	LAB Based on the Above topics	T1,R1	6	Hardware Tools
UNIT-III				
13	Instruction codes, Computer Registers	T2,R1	2	PPT
14	Computer Instructions, Instruction Cycle,Timing and Control,Memory Reference Instructions	T2,R1	2	PPT
15	Input-Output Interrupt,Complete Computer Description,Design of Basic Computer	T1,R1	3	PPT
16	Central Processing Unit, General Register Organization,Stack Organization	T2,R1	3	Chalk & Talk
17	Instrution Formats, Addressing Modes,Data Transfer & Manipulation	T1,R1	2	Chalk & Talk
18	Program Control, RISC, RISC vs CISC	T1,R1	3	Chalk & Talk
19	LAB Based on the Above topics	T1,T2	9	HARDWARE TOOLS
UNIT -IV				

20	Pipeline, RISC Pipeline, Periphral Devices	T2	1	Students Seminar
21	I/O Interface, Async. Data transfer, Modes of Transfer	T1,R1	1	Chalk & Talk
22	Priority Interrupt,Direct Memory Access, IOP	T1,R1	2	Chalk & Talk
23	Memory Hierarchy,Main Memory, Auxiliary memory, Associative Memory	T2,R1	2	Chalk & Talk
24	Cache Memmory,Virtual memory, Memory Management Hardware	T1,R1	2	Chalk & Talk
25	LAB Based on the Above topics	T2	4	HARDWARE TOOLS

Total :Lectures: 45 Labs : 27

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

T1 Donald P Leach, Albert Paul Malvino, Goutam Saha- Digital Principals & Applications, TataMcGraw Hill Education Private Limited,2011 Edition

T2 M. Morris Mano, Computer System Architecture, Prentice Hall of India Pvt. Ltd.

B. REFERENCE BOOKS:

R1 William Stalling- Computer Organizations & Architecture, Pearson/PHI, 6th Edition

C. GOOGLE CLASSROOM LINK

https://classroom.google.com/c/NzUxOTU4MjcyOTgw?cjc=drrce3f

DIGITAL CONTENT:

W1. https://www.geeksforgeeks.org/digital-electronics-logic-design-tutorials/

W2. https://nptel.ac.in/courses/108105132

Institute of Management & Technology,Faridabad

Department of Computer Applications(BCA)

Lecture Plan

COURSE:	**General English-I**	**CODE:**	**25ENGX01AE01**
CLASS:	**BCA-1st Sem**	**ACADEMIC YEAR:**	**2025-26**
FACULTY:	**Ms. Neeru Sharma**		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
UNIT- 1				
1	Concept of word formation	R1, W1	2	PPT
2	Root words from foreign languages and its uses (prefixes, suffixes, synonyms, antonyms)	W1	2	Chalk & Talk/Word games
3	Sentence structure, use of phrases and clauses, importance of proper punctuation	W1	2	Chalk & Talk /Practice Exercises
4	Introduction of Language Skills	R1 ,W4	2	Chalk & Talk /PPT
UNIT-2				
5	Parts of Speech	T2, W1	1	Chalk & Talk
6	Subject-Verb agreement	T2, W1	2	Chalk& Talk /Practice Exercise
7	Noun-Pronoun Agreement	T2, W1	2	Chalk & Talk /Practice Exercises
8	Misplaced Modifiers, Redundancies	T2, R2	1	Chalk & Talk
9	Common grammar errors and corrections	T2, W2	1	Practice Exercises
	UNIT-3			
10	Nature and Style of sensible writing	W2	2	PPT
11	Importance of introduction and conclusion in writing	W2	1	Chalk & Talk
12	Types of paragraph / essay writing	R2, W2	2	Chalk &Talk /Assignment
13	Letter-Writing (Formal, Informal)	R2, W2	2	Chalk & Talk /Practice session in class
	UNIT-4			
14	Importance of listening in communication	W3	2	Smart board ,Audio - Visual

15	Listening comprehension exercises	W3	2	Audio _ Visual
16	Listening tests	W3	2	Audio-Visual

Total Lectures: 28

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

T1 Communication Skills in English,Anjana Tiwari , Khanna Book Publishing Co., 2023

T2 On Writing Well. William Zinsser. Harper Resource Book. 2001

B. REFERENCE BOOKS:

R1 Practical English Usage , Michael Swan. OUP.

R2 Effective Communication Skills

C. GOOGLE CLASSROOM LINK :

https://classroom.google.com/c/ODAwOTMzOTY1NDM4?cjc=jkulype4

DIGITAL CONTENT:

W1. https://www.slideshare.net/slideshow/word-formation-tokaeva-114/35092626

W2. https://www.studypool.com/documents/19841576/-nature-style-of-sensible-writing-english-important-ppt-

W3. https://dailydictation.com/english-listening-materials-audio-free-download

W4. https://www.verbalplanet.com/blog/the-four-key-language-skills-importance.asp

Institute of Management & Technology,Faridabad

Department of Computer Applications(BCA)

Lecture Plan

COURSE:	**Indian Knowledge Syatem**	**CODE:**	**25SOCX01MD01**
CLASS:	**BCA 1st sem**	**ACADEMIC YEAR:**	**2025-2026**
FACULTY:	**Ms. Nancy Dang**		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
MODULE-1				
1	Indian Knowledge System	T1,R1	2	Chalk & Talk
2	Indian Culture & Civilization	T1,R1	2	Chalk & Talk
3	Ancient Indian Astronomy	T1,R1	2	PPT
4	Indian Astronomical Instruments	T1,R1	1	PPT
5	Indian Knowledge System (Upveda: Ayurveda)	T1,R1	1	Chalk & Talk
6	Indian Architecture I: Sthapatya-Veda	T1,R1	2	PPT
7	Indian Architecture II: Temples	T1,R1	2	Chalk & Talk
8	Indian Philosophical System	T1,R1	2	Chalk & Talk
UNIT-2				
8	Vastuvidya: art of engineering	T1,R1	2	Chalk & Talk
9	Takshana: art of carpentry	T1,R1	2	Chalk & Talk
10	Alekhya vidya: art of painting	T1,T2	2	Chalk & Talk
11	Bhushanayojana: art of applying or setting ornaments	T1,R1	2	PPT
12	Nritya vidya: art of dancing	T1,R1	2	Chalk & Talk
13	. Geet vidya : art of singing	T1,R1	2	Chalk & Talk
14	Vadya vidya: art of playing on musical instruments	T1,R1	2	Chalk & Talk
15	Akara jnana: art of mineralogy	T1,R1	2	PPT

Total Lectures: 30

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

T1:Textbook on IKS by Prof. B Mahadevan, IIM Bengaluru.

. **T2**: V K Bansal, Maha Vastu, Om Book Internation 2011 12.

T3:S Das, The Miracles of Vaastu Shastra, pustak mahal, delhi, 2013,

B. REFERENCE BOOKS:

R1:The Cultural Heritage of India. Vol.I. Kolkata:Ramakrishna Mission Publication, 1972.
R2:Nair, Shantha N. Echoes of Ancient Indian Wisdom. New Delhi: Hindology Books, 2008

C. Classroom Link

https://classroom.google.com/c/ODA4Mzk5NTIwOTM2?cjc=awpazm64

DIGITAL CONTENT:

W1: Indian temple architecture | PPTX
W2 : Indian Knowledge System | PDF
W3 Ancient indian astronomy and mathematics | PPTX

Institute of Management & Technology,Faridabad

Department of Computer Applications (BCA)

Lecture Plan

COURSE:	Environmental Science and Sustainability	**CODE:**	25CSAX01VA01
CLASS:	BCA 1st Sem	**ACADEMIC YEAR:**	2025-26
FACULTY:	Mrs.Heteshi Gupta		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
UNIT-I				

1	Fundamental Environment concepts And their relevance to business Operations.	T1, R1	1	Chalk & Talk
2	Components of the environment	T1, R1	1	Chalk & Talk
3	Segments of the environment	T1, R1	1	Chalk & Talk
4	The man-environment relationship and Historical environmental movements.	T1, R1	1	Chalk & Talk
5	Concept of Sustainability and Sustainability Goals.	T1, R1	1	Chalk & Talk
6	Classification of Natural resources,issues related to their overutilization and strategies for their conservation.	T1, R1	1	Chalk & Talk
7	Sustainable practices in managing resources including deforestation, Water conservation,energy security and food security issues.	T1, R1	1	Chalk & Talk
8	Conservation and equitable use of resources	T1, R1	1	Chalk & Talk
9	Intergenerational and Intergenerational Equity.	T1, R1	1	Chalk & Talk
10	Importance of public awareness and Education.	T1, R1	1	Chalk & Talk
UNIT-II				
11	Ecosystems and its types.	T1, R1	1	Chalk & Talk
12	Structure and Functions ojf Ecosystems	T1, R1	1	Chalk & Talk
13	Characteristics Of Ecosystem	T1, R1	1	Chalk & Talk
14	Biodiversity and its importance	T1, R1	1	Semin
15	Threats faced by Biodiversity and the methods used for its conservation.	T1, R1	1	Chalk & Talk
16	Ecosystem resilience,homostasis and carrying capacity.	T1, R1	1	Chalk & Talk
17	Emphasizing the need for sustainable Ecosystem management.	T1, R1	1	Chalk & Talk
18	Strategies for in-situ and ex-situ conservation.	T1, R1	1	Chalk & Talk
19	Nature Reserves.	T1, R1	1	Chalk & Talk
20	Significance of India as a mega diverse Nation.	T1, R1	1	Chalk & Talk
UNIT-III				
20	Environmental Pollution and its types.	T2, R1	1	Chalk & Talk
21	Air,Water and Soil pollution.	T2, R1	1	Chalk & Talk
22	Noise and Marine pollution	T2, R1	1	Chalk & Talk
23	Causes and Controlling measures of Pollution.	T2, R1	1	Chalk & Talk
24	Impact of pollution on businesses and	T2, R1	1	Chalk & Talk

	communities			
25	Ozone layer depletion,green house effect and Acid rain	T2, R1	1	Chalk & Talk
26	Importance of adopting cleaner technologies.Solid Waste management	T2, R1	1	Chalk & Talk
27	Natural and Man made disasters,their management and the role of businesses im mitigating disaster impacts.	T2, R1	1	Chalk & Talk
UNIT-IV				
28	Dynamic interactions between society and environment based on sustainability and environmental ethics	T2,R1	1	Chalk & Talk
29	Role of businesses in achieving sustainable development goals and promoting responsible consumption.	T2,R1	1	Chalk & Talk
30	*Environmental legislation and the judiciary's role in environmental protection including the Water act of 1974.*	T2,R1	1	Chalk & Talk
31	The Environment(Protection) act of 1986 and the Air (Prevention and Control of Pollution) Act of 1981	T2,R1	1	Chalk & Talk
32	Environmental justice,Environmental refugees and the resettlement and rehabilitation of affected populations	T2,R1	1	Chalk & Talk
33	Ecological economics,human population growth and demographic changes in India.	T2,R1	1	Chalk & Talk

Total Lectures: 33

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

T1. Poonia, M.P. Environmental Studies (3rd ed.), Khanna Book Publishing Co.

T2. Bharucha, E. Textbook of Environmental Studies (3rd ed.) Orient Blackswan Private Ltd.

B. REFERENCE BOOKS:

R1 Environmental Studies by Dr. Mrs. Rajesh Dhankar Daya Publishing House Astral International Pvt. Ltd.

C. GOOGLE CLASSROOM LINK

https://classroom.google.com/c/ODAyNTMxNDgxMjQw?cjc=5hfg4emv

DIGITAL CONTENT

W1. https://www.slideshare.net/slideshow/environmental-science-book-by-dr-y-k-singh/269388327
W2. https://microbenotes.com/ecosystem-definition-structure-factors-types-functions/

SEMESTER-III

Institute of Management & Technology,Faridabad

Department of Computer Applications(BCA)

Lecture Plan

COURSE:	**Operating System**	**CODE:**	24BCA403DS01
CLASS:	**BCA 3rd Semester**	**ACADEMIC YEAR:**	2025-26
FACULTY:	**Ms. Pinki Sharma**		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
UNIT-I				
1	Introduction to Operating System: Evolution, Objectives , Characteristics; Classification of Operating Systems	T1,R1	3	Chalk & Talk
2	System Calls, OS services, OS Structures	T1,R1	3	Chalk & Talk
3	Operating System Functions,Virtual Machines	T1	2	Chalk & Talk
UNIT-II				
4	Process Concepts: Definition of Process , Process State Model, Process Control Block.	T1,T2	2	PPT
5	Threads – Concept of multithreads , Benefits of threads – Types of threads,scheduling queues , Context Switch	T1,R1	2	Chalk & Talk
6	Operations on processes,Cooperating processes,Inter-process Communication	T1	3	Chalk & Talk
7	Process Scheduling: Definition, Scheduling objectives, Types of Schedulers, Scheduling criteria.	T1,R1	2	Chalk & Talk
8	Scheduling Algorithms: Preemptive and Non-preemptive, FCFS–SJF–RR	T1,R1	4	Chalk & Talk
9	Multiprocessor scheduling: Types, Performance evaluation of the scheduling.	T1,R1	1	Chalk & Talk
UNIT-III				
10	Memory Management: Basic Memory Management, Logical and Physical address space, Memory allocation, Fragmentation and Compaction	T2	3	Chalk & Talk

11	Paging and its disadvantages,PMT , Segmentation :Hardware Support ,protection and Sharing	T2,R1	3	Chalk & Talk
12	Virtual Memory: Need of Virtual Memory Demand paging concept, pure Demand Paging.	T2	2	Chalk & Talk
13	Handling page faults, performance of demand paging	T1	1	Chalk & Talk
14	Page replacement algorithms, Allocation of Frames , Thrashing	T1	3	Chalk & Talk
UNIT-IV				
15	Input/Output Management: I/O devices, Types of I/O devices , Device Independent I/O ,user Space I/O	T2,R1	2	Chalk & Talk
16	Device controllers ,Device drivers , Principles of I/O Software: Goals of Interrupt handlers	T1	2	PPT
17	Memory mapped I/O, Direct Memory Access (DMA) , Secondary-Storage Structure: Disk structure, Disk scheduling algorithms.	T2	3	Chalk & Talk
18	File System Interface: File concept, attributes,File Operations , types	T2,R1	2	Chalk & Talk
19	File access methods:- Sequential access, Direct access and Indexed Sequential	T1	2	Chalk & Talk
20	Directory Structures : Single Level , Two Level and Tree Structured , File protection and Sharing	T2	1	Chalk & Talk

Total Lectures: 46

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

✓ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

[T1] Silberschatz & Galvin: Operating System Concept, Wiley.
[T2] Andrew S. Tanenbaum –Modern Operating Systems,Pearson

B. REFERENCE BOOKS:

[R1] William Stallings: Operating Systems, PHI

C. GOOGLE CLASSROOM LINK

https://classroom.google.com/c/Nzk2MzI5Njc4MDc1?cjc=p27zvwij

DIGITAL CONTENT:

W1. https://www.os-book.com/OS9/slide-dir/index.html

W2. https://codex.cs.yale.edu/avi/os-book/OSE2/slide-dir/index.html

Institute of Management & Technology, Faridabad

Department of Computer Applications (BCA)

Lecture Plan

COURSE:	**OBJECT ORIENTED PROGRAMMING USING C++**	**CODE:**	**24BCA403DS02**
CLASS:	**3rd Sem**	**ACADEMIC YEAR:**	**2025-26**
FACULTY:	**Dr.Rakesh Chandra Verma**		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
Unit 1				
1	Procedural Language and Object Oriented approach	T1,R1	2	Chalk & Talk
2	Characteristics of OOP	T1,R1	2	
3	User defined types	T1,R1	2	
4	polymorphism and encapsulation.	T1,R1	2	
5	Getting started with C++: syntax, data types, variables, string, function	T1,R1	2	
6	namespace and exception, operators flow control, recursion, array and pointer, structure	T1,R1	2	
7	Computer Lab Based on the above topic	T1,R1	4	
Unit 2				
8	Abstracting Mechanism:classes, private and public	T1,R1	2	Chalk & Talk
9	Constructor and Destructor	T1,R1	2	
10	member function	T1,T2	2	
11	static members, references	T1,R1	2	
12	Memory Management:new, delete, object copying	T1,R1	2	
13	copy constructer	T1,R1	2	
14	assignment operator, this input/output	T1,R1	2	
15	Computer Lab Based on the above topic	T1,R1	4	
Unit 3				
16	Inheritance and Polymorphism: Derived Class and Base Class	T1	2	Chalk & Talk And PPT
17	Different types of Inheritance,	T1	2	

18	Overriding member function	T1	2	Chalk & Talk
19	Abstract Class, Public and Private Inheritance	T1	2	
20	Ambiguity in Multiple inheritance Virtual function, Friend function, Static function.	T1	2	
21	Computer Lab Based on the above topic	T1,R1	4	
Unit 4:				
22	Exception Handling: Exception and derived class, function exception declaration	T1,R1	2	Chalk & Talk
23	unexpected exception, exception when handling exception, resource capture and release	T1,R1	2	
24	Template and Standard Template Library: Template classes, declaration, template functions namespace, string, iterators, hashes, iostreams and other types.	T1,R1	3	
25	Computer Lab Based on the above topic	T1,R1	4	

Total Lectures: 43(Theory) And 16(Lab)

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

[T1] Object Oriented Programming with C++. Bala Guruswamy, THM.

B. REFERENCE BOOKS:

[R1] Let us C++, Yashwant Kanitkar, BPB Publications.

C. GOOGLE CLASSROOM LINK

https://classroom.google.com/c/NzExNjg2MTA1MDg1?cjc=rz4pmd7

DIGITAL CONTENT:

W1 www.zoho.com
W2 www.bigcommerce.com

Institute of Management & Technology,Faridabad

Department of Computer Applications(BCA)

Lecture Plan

COURSE:	**Database Management System**	**CODE:**	**24BCA403DS03**

CLASS:	BCA 3rd Sem	ACADEMIC YEAR:	2025-2026
FACULTY:	Ms. Nancy Dang		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of L/P	Delivery Method
Unit 1				
1	Introduction, Database System Applications, History of Database Systems	T1,R1	2	Chalk & Talk
2	Database System Vs. File Processing System, View of Data, Data Abstraction	T1,R1	2	Chalk & Talk
3	Instances and Schemas. DBMS Environment	T1,R1	1	PPT
4	Database languages, Database Models Physical, Conceptual and Logical Database design	T1,R1	2	PPT
5	Entity- Relationship Model: Entities, Relationships, Representation of entities, attributes	T1,R1	2	PPT
6	Generalization, Aggregation ,Conceptual design with ER Model	T1,R1	1	Chalk & Talk
7	Lab based on SQL queries for DDL commands: Create, Desc, Alter, Rename, Drop.	T1,R1	2	S/W Tools
Unit-2				
8	Introduction to the Relational Model, Attributes, Domains, Tuples	T1,R1	1	Chalk & Talk
9	Relations and their schemes, relation representation, , relation representation	T1,R1	2	Chalk & Talk
10	Keys, relationship, relational operations, , Integrity Constraint Over relations,	T1,R1	2	PPT
11	Querying relational data, View: Introduction to Views, Destroying / altering Views.	T1,R1	1	Chalk & Talk
12	Relational Algebra and Calculus: Relational Algebra & its operations	T1,R1	2	Chalk & Talk
13	Relational calculus & its types	T1,R1	1	Chalk & Talk
14	Power of Algebra and calculus.	T1,R1	1	PPT
15	Lab based on SQL queries using Logical operations: AND, OR, NOT, IN, BETWEEN, LIKE.	T1,R1	2	S/W Tools
Unit 3				
16	Normalization: Schema Refinement, Problems caused by redundancy,	T1	2	PPT
17	Decomposition & its properties; Normalization: First, Second, Third Normal forms	T1	2	Chalk & Talk
18	BCNF, Multivalued Dependencies, Join Dependencies.	T1	2	Chalk & Talk
19	ACID properties, Transactions and Schedules, Concurrent execution of transaction, Serializability and Recoverability	T1	2	Chalk & Talk
20	Lock based Concurrency control, Lock Management, Lock Conversion, Dealing with deadlocks, Concurrency without Locking.	T1,R1	2	PPT
21	LAB on SQL queries to get current date and time: NOW, CURDATE, CURTIME, LAST_DAY, DATE_FORMAT.	T1,R1	2	S/W Tools
Unit 4				

22	Crash Recovery and Backup: Failure classifications, storage structure, Recovery & Atomicity, Log base recovery	T1,R1	2	PPT
23	Recovery with concurrent transactions, Failure with loss of nonvolatile storage, Database backup & recovery from catastrophic failure, Remote Backup System.	T1,R1	2	Chalk & Talk
24	Overview of physical storage media, Storage access; File organization, Operations on Files, Serial Files, Sequential Files , Index-Sequential Files, Direct Files.	T1,R1	3	Chalk & Talk
25	Lab on SQL queries for Relational algebra operations: SELECT, PROJECT, UNION, INTERSECTION, DIFFERENCE. 11. Write SQL queries to perform table joins: INNER JOIN, LEFT OUTER JOIN, RIGHT OUTER JOIN, FULL OUTER JOIN.	T1	2	S/W Tools

Total Lectures: 37 Lab:8

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOK:

T1: Seymour Lipschutz, "Data Structure"Tata-McGraw-Hill
Horowitz, Sahni & Anderson-Freed,
T2: "Fundamentals of Data Structures in C", Orient Longman. Trembley, J.P. And Sorenson P.G.,
T3: "An Introduction to Data Structures With Applications", McGraw- Hill International Student Edition,

B. REFERENCE BOOKS:

R1 C#: A Beginner's Guide, Herbert Schidlt, Tata McGraw Hill

Classroom Link :
https://classroom.google.com/c/NzA3Nzc5MjI4NzM0?cjc=5nwjxlj

DIGITAL CONTENT:

W1: SQL Tutorial
W2: DBMS Tutorial – Learn Database Management System - GeeksforGeeks
W3: DBMS Tutorials

Institute of Management & Technology,Faridabad

Department of Computer Applications(BCA)

Lecture Plan

COURSE:	STATE AND DISTRICT ADMINISTRATION	CODE:	25PUB403MI01
CLASS:	3rd SEM	ACADEMIC YEAR:	2025-2026
FACULTY:	Ms. Lovely		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
Unit 1				
1	Political executive at state level	T1,R1	2	Chalk & Talk
2	Governor and it's power and position	T1,R1	2	Chalk & Talk
3	Chief minister: power and position	T1,R1	1	PPT
4	Council of ministers	T1,R1	1	PPT
5	Organization and function	T1,R1	2	Chalk & Talk
6	State planning board	T1,R1	1	PPT
7	Organization of state planning board	T1,R1	2	Chalk & Talk
Unit 2				
8	Chief secretary in state administration	T1,R1	1	Chalk & Talk
9	Haryana public service commission	T1,R1	1	Chalk & Talk
10	Composition and function of HPSC	T1,T2	2	Chalk & Talk
11	Haryana state information commission	T1,R1	2	PPT
12	Haryana right to service commission	T1,R1	2	Chalk & Talk
13	Haryana Lokayukta	T1,R1	2	Chalk & Talk
14	Power of Lokayukta	T1,R1	2	Chalk & Talk
15	Position of Lokayukta	T1,R1	2	Chalk & Talk
Unit 3				
16	Deputy commissioner at district level	T1	2	PPT
17	Superintendent of police at district level	T1	2	Chalk & Talk

18	District consumer forum	T1	2	Chalk & Talk
19	Organisation and function of district consumer forum	T1	1	Chalk & Talk
20	District rural development agency	T1	2	Chalk & Talk
21	Role and function of district development and panchayat officer	T1,R1	2	Chalk & Talk
Unit 4				
22	Municipal commissioner and it's power	T1,R1	1	PPT
23	Composition and function of district planning committee	T1,R1	2	Chalk & Talk
24	Role and function of block development	T1,R1	2	Chalk & Talk
25	Panchayat officer and panchayat secretary	T1,R1	2	Chalk & Talk
26	Chief executive officer of zila parishad	T1,R1	2	Chalk & Talk

Total Lectures: 45

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

[T1] R.K Sapru, Indian administration,sage publication pvt .ltd , New Delhi

B. REFERENCE BOOKS:

[R1] B.L faida & K.faida, Indian administration, sahitya bhawan publication, Agra ,2017 **C**

.Google Classroom Link https://classroom.google.com/c/NzIxMjQ5NTEwMTE1?cjc=vy53tnd

DIGITAL CONTENT:

W1 https://www.geeksforgeeks.org/
W2 https://www.tutorialspoint.com/

Institute of Management & Technology,Faridabad

Department of Computer Applications(BCA)

Lecture Plan

COURSE:	**JAVA PROGRAMMING**	**CODE:**	**25CSC403SE01**
CLASS:	**BCA III Sem**	**ACADEMIC YEAR:**	**2025-26**
FACULTY:	**Ms. URVIJA RAINA**		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
UNIT-I				
1	Java Features, Setting Up the Java Development Environment, Java Virtual Machine(JVM) and Bytecode, Java Development Kit(JDK) and Java Runtime Environment(JRE), Java program syntax and structure	R1	1	Chalk & Talk,PPT
2	Writing, compiling and running a Java Program, Identifiers,Keywords, literals, comments, Variables and its types	T1,R1	1	Chalk & Talk
3	Constants, Expressions, Operators,Assignments,Data Types	T1,R1	1	Chalk & Talk,PPT
4	Control flow statements,If-else,switch, loops(for,while,do-while)	T1,R1	1	Chalk & Talk,PPT
5	Labs based on above topics	T1,R1	8	Chalk & Talk
UNIT-II				
6	Initializing array, Single Dimensional Array, Using Collection	T1,R1	1	Chalk & Talk
7	Operation on String, Mutable & Immutable String, Basic Loop for String, Creating Strings using StringBuffer	R1,R2	1	PPT
8	Object and its Life cycle, Creating and Operating objects,Constructor, Initialization code block,Access Control,Inner class, Abstract class	T1,R1	1	Chalk & Talk,PPT
9	Argument Passing mechanism, Method Overloading, Recursion, Use of Access Modifiers with Classes & Methods	T1,R1	1	Chalk & Talk
10	Labs based on above topics	T1,R1,R2	8	Chalk & Talk,PPT
UNIT-III				
11	Use and Benefits of Inheritance in OOPs,Types of Inheritance, Inheriting Data members and Methods	T1,R1	1	Chalk & Talk

12	Role of Constructors in inheritance, Overriding super class methods, Use of "super"	T1,R1	1	Chalk & Talk
13	Polymorphism, Purpose of interface,defining an interface, implementing interfaces	T1,R1	1	Chalk & Talk
14	Interface reference variables, interface with variables, extending interfaces	T1,R2	1	Chalk & Talk
15	Labs based on above topics	T1,R1	8	Chalk & Talk
UNIT-IV				
16	Types of errors, Try-catch Block, Finally clause, Throw and throws keywords, Creating custom exceptions	T1,R1	1	Chalk & Talk
17	Packages as access protection, Defining package, CLASSPATH Setting for packages, Import and Naming Convention for packages	T1,R2	1	Chalk & Talk,PPT
18	GUI programming	T1,R1	1	Chalk & Talk,PPT
19	Labs based on above topics		6	Chalk & Talk.PPT

Total Lectures: 15(Lectures) + 30(Labs)

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

T1 Programming in Java A Primer, E Balagurusamy, Tata McGraw Hill Publication

B. REFERENCE BOOKS:

R1 Java The Complete Reference, Herbert Schildt, Tata McGraw Hill Publication
R2 Beginning Java, Ivor Horton, Wrox Publications

DIGITAL CONTENT:

W1. https://docs.oracle.com/javase/tutorial/
W2. https://www.javatpoint.com/java-tutorial
W3. https://www.w3schools.com/java/
W4. https://classroom.google.com/c/ODA0MDEzNzA1MjMz?cjc=wcnjei2r

Institute of Management & Technology,Faridabad

Department of Computer Applications(BCA)

Lecture Plan

COURSE:	Mass Media & Society	**CODE:**	25JMC403MD01
CLASS:	BCA 3rd Sem	**ACADEMIC YEAR:**	2025-26
FACULTY:	Mrs.Heteshi Gupta		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
UNIT-I				
1	Introduction about Media	T2, R2	1	Chalk & Talk
2	Types of Media	T2, R1	2	Chalk & Talk
3	Mass Communication	T1, R2	2	Chalk & Talk
4	Difference Between Mass Media and Mass Communication	T1, R2	1	Chalk & Talk
5	Role of Media in Society	T1, R2	2	Chalk & Talk
6	Mass Media and Information Society	T2, R2	2	Chalk & Talk
UNIT-II				
11	Role and Functions of Media in our life	T2, R2	2	Chalk & Talk
12	Role of Media in Social Development	T1, R2	2	Chalk & Talk
13	Impact of Media on Society and Community	T1, R1	1	Chalk & Talk
14	Impact of Media on Children (Positive and Negitive Impact)	T1, R1	1	Chalk & Talk
15	Impact of Media on Teens (Positive and Negitive Impact)	T2, R2	1	Chalk & Talk
16	Impact of Media on Youth (Positive and Negitive Impact)	T1, R2	1	Chalk & Talk
17	Role of Media in Gender Sensitization		1	Chalk & Talk
UNIT-III				
20	Media Litrecy	T2, R1	2	Chalk & Talk
21	Role of Media in democracy	T2, R1	2	Chalk & Talk
22	Media and Civil Society	T2, R1	2	Chalk & Talk
23	Media and Rural Society	T2, R1	2	Chalk & Talk
24	Difference Between Media in Civil Society and Media in Rural Society	T2, R1	1	Chalk & Talk

25	Media and Governance	T2, R1	2	Chalk & Talk
26	Media and Democracy Promotion	T2, R1	2	Chalk & Talk
UNIT-IV				
28	Media and Environmental Issues	T2,R1	2	Chalk & Talk
29	Global Warming	T2,R1	1	Chalk & Talk
30	Climate Change Problem and Impact	T2,R1	2	Chalk & Talk
31	Role of Media in Prompting Environmental Awarness	T2,R1	2	Chalk & Talk
32	Role of Media in Development of Scientific Temprament in Society	T2,R1,	2	Chalk & Talk
33	Citizen Journalisim	T2,R1	1	Chalk & Talk
34	Importance of Citizen Journalisim	T2, R2	1	Chalk & Talk
35	Role of Media in Promoting Culture and Heritage	T2, R2	2	Chalk & Talk

Total Lectures: 45

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

T1. Mass Communication in India: Kumar J. Keval (Jaico Publishing House)
T2. Mass Communication Principles and Concept: Hasan,Seema (CBS Publishers)

B. REFERENCE BOOKS:

R1. Mass Media and Public Issues: Gopal Bhargava
R2.Media and Society:Critical Perspectives :Graeme Burton

C. GOOGLE CLASSROOM LINK

https://classroom.google.com/c/ODA4NjI1NjE4NTA5?cjc=moljgnwz

DIGITAL CONTENT

W1. https://researchcage.com/2023/05/04/the-role-of-mass-media-in-society/
W2. https://jgu.edu.in/blog/2024/02/22/what-are-the-different-types-of-media/

Institute of Management & Technology,Faridabad

Department of Computer Application(BCA)

Lecture Plan

COURSE:	**ENGLISH 2**	**CODE:**	**24ENGS03AE01**
CLASS:	**BCA – 3rd Sem**	**ACADEMIC YEAR:**	**2025-26**
FACULTY:	**Ms. Neeru Sharma**		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
UNIT-I				
1	Language Skills	T1, R2, W! , W4	2	PPT
2	Syllable, Stress, Types of Stress	T1 , w2	2	Chalk & Talk/ Audio - Visual
3	Transcription of Multisyllabic Words	T!, W2	2	Chalk & Talk
4	Intonation & its Types	T2, R2 ,W2	2	Chalk & Talk /Audio-Visual
	UNIT-2			
5	Clause and Its Types	T2, R2	2	Chalk & Talk/
6	Verbs (Finite/Non-Finite)	T2, R2	2	Chalk& Talk
7	Infinitive ,Gerund ,Participles, Modal	T2 ,R2	2	Chalk & Talk
8	Tenses	T2 ,R2, W2	2	Chalk & Talk/PPT
	UNIT-3			
9	Writing Skills and Its Mechanics	R1 ,W3	2	Chalk &Talk /PPT
10	Barriers of Effective Writing	R1 ,W3	1	Chalk & Talk
11	Steps to Overcome Barriers	R1 ,W3	1	Chalk & Talk
	UNIT-4			
12	Paragraph - Writing (Descriptive, Argumentative, Expository)	R2,W2 ,W4	2	Chalk& Talk
13	Letter-Writing	R2, W2 ,W4	2	Chalk & Talk
14	Dialogue -Writing	R2, W2	1	Chalk & Talk
15	Email Writing	R2 , W2	1	Chalk & Talk

16	Blog- Writing	R2 ,W2	2	Chalk & Talk

Total Lectures: 28

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

T1 English Phonetics for Indian Students, Textbook by Balasubramanian,T
T2 A Practical English Grammar by Thomson, A.J. and A.V.Martinet.

B. REFERENCE BOOKS:

R1 English for Ability Enhancement by Orient Blackswan
R2 Speak Better Write Better English by Lewis, Norman

C GOOGLE CLASSROOM LINK

https://classroom.google.com/c/NzM4NDIxOTM5NTc0?cjc=gnr3t7t

DIGITAL CONTENT:

W1. https://www.your-english.net/downloads/grammar/english-grammar-basics-ppp/
W2. https://www.bbau.ac.in/Docs/FoundationCourse/TM/AECC105/Grammar.pdf
W3. https://www.academia.edu/42885390/Nature_and_Style_of_Sensible_Writing
W4. https://www.verbalplanet.com/blog/the-four-key-language-skills-importance.asp

SEMESTER-V

Institute of Management & Technology,Faridabad

Department of Computer Applications(BCA)

Lecture Plan

COURSE:	**Management Information System**	**CODE:**	**BCA-301**
CLASS:	**5th Sem**	**ACADEMIC YEAR:**	**2025-2026**
FACULTY:	**Ms. Heena Dhawan**		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
Unit 1				
1	Introduction to system and basics system concepts	T1,R1	2	Chalk & Talk
2	Types of system,System Approch	T1,R1	2	Chalk & Talk
3	Information system definationand characterstics	T1,R1	1	PPT
4	Types of information	T1,R1	2	PPT
5	Role of information in decision making	T1,R1	1	Chalk & Talk
6	EDP and DSS	T1,R1	2	PPT
7	Sub-system of an information system	T1,R1	1	Chalk & Talk
Unit 2				
8	Overview of Management information System	T1,R1	1	Chalk & Talk
9	Defination and Characterstics	T1,R1	2	Chalk & Talk
10	Component of MIS	T1,T2	2	Chalk & Talk
11	Framework for Understanding MIS	T1,R1	2	PPT
12	Information Requirements	T1,R1	1	Chalk & Talk
13	Level of management and formal vs informal syastem	T1,R1	2	Chalk & Talk
14	Simon's Model of decision making	T1,R1	2	Chalk & Talk
15	Structure VS unstructured decisions	T1,R1	2	PPT
Unit 3				
16	Developing Information system	T1	2	PPT

17	Design of informastion System	T1	2	Chalk & Talk
18	Implementation of DIS	T1	2	Chalk & Talk
19	Analysis of DIS	T1	2	Chalk & Talk
20	Evaluation of DIS	T1	1	Chalk & Talk
21	Pitfalls in MIS development	T1,R1	2	PPT
Unit 4				
22	A study of personnel ,financisl and production MIS	T1,R1	2	PPT
23	Introduction to e business system	T1,R1	2	Chalk & Talk
24	E commerce technologies and applications	T1,R1	2	Chalk & Talk
25	Decision Support system	T1,R1	1	
26	DSS palnning ,control and decision making	T1,R1	2	Chalk & Talk

Total Lectures: 45

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

[T1] J.Kanter, "Management information systerm", PHI

B. REFERENCE BOOKS:

[R1 James A. senn, "Analysis and design", McGraw Hill

C .Google Classroom Link

https://classroom.google.com/c/NzgwMTczMzQ2NTEz?cjc=3vy36zvv

DIGITAL CONTENT:

W1 https://misnotes.us/ch01_mis/notes/mis/
W2 https://drmuchelule.com/wp-content/uploads/2021/01/MIS-NOTES-.pdf

Institute of Management & Technology,Faridabad

Department of Computer Applications(BCA)

Lecture Plan

COURSE:	**Computer Graphics**	**CODE:**	**BCA-302**
CLASS:	**BCA 5th Sem**	**ACADEMIC YEAR:**	**2025-2026**
FACULTY:	**Ms. Nancy Dang**		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
UNIT-1				
1	Graphics Primitives: Introduction to computer graphics, Basics of Graphics systems, Application areas of Computer Graphics,	T1,R1	2	Chalk & Talk
2	Overview of graphics systems, video-display devices.	T1,R1	2	Chalk & Talk
3	Raster-scan systems, random scan systems, graphics monitors and workstations and input devices.	T1,R1	2	PPT
4	Points and lines, line drawing algorithms	T1,R1	2	PPT
5	Mid-point circle and ellipse algorithms	T1,R1	2	Chalk & Talk
6	Scan line polygon fill algorithm	T1,R1	2	PPT
7	Bboundary fill and floodfill algorithms .	T1,R1	1	Chalk & Talk
UNIT-2				
8	Geometrical Transforms: Translation, scaling	T1,R1	1	Chalk & Talk
9	Rotation, Reflection and Shear transformations	T1,R1	2	Chalk & Talk
10	Matrix representations and homogeneous coordinates, composite transforms, transformations between coordinate systems.	T1,T2	2	Chalk & Talk
11	The viewing pipeline, viewing coordinate reference frame	T1,R1	2	PPT
12	Window to viewport coordinate transformation	T1,R1	1	Chalk & Talk
13	Viewing functions, Cohen-Sutherland and	T1,R1	2	Chalk & Talk
14	Cyrus-beck line clipping algorithms	T1,R1	1	Chalk & Talk
15	Sutherland –Hodgeman polygon clipping algorithm.	T1,R1	1	PPT
Unit 3				

16	Polygon surfaces, quadric surfaces	T1	2	PPT
17	Spline representation, Hermite curve	T1	2	Chalk & Talk
18	Bezier curve and B-Spline curves,	T1	2	Chalk & Talk
19	Bezier and B-Spline surfaces	T1	2	Chalk & Talk
20	Basic illumination models,	T1	2	Chalk & Talk
21	Polygon-rendering methods.	T1,R1	2	PPT
Unit 4				
22	3-D Geometric Transformations: Translation, rotation, scaling	T1,R1	2	PPT
23	Reflection and shear transformations, composite transformations.	T1,R1	2	Chalk & Talk
24	Viewing pipeline, viewing coordinates, view volume	T1,R1	2	Chalk & Talk
25	general projection transforms and clipping	T1,R1	2	Chalk & Talk

Total Lectures: 45

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

T1. Donald Hearn and M. Pauline Baker : Computer Graphics, PHI Publications.
T2. Plastock : Theory & Problem of Computer Gaphics, Schaum Series.
T3. Foley & Van Dam : Fundamentals of Interactive Computer Graphics, Addison-Wesley.

[

B. REFERENCE BOOKS:

R1 :Newman : Principles of Interactive Computer Graphics, McGraw Hill

C.**Classroom Link**
https://classroom.google.com/c/NzA4MzIzMDQ0MTM4?cjc=gvit5ul

DIGITAL CONTENT:

W1 : Introduction to Computer Graphics - GeeksforGeeks
W2 : Computer Graphics Tutorial
W3 : Bresenham's line drawing algorithm | PPTX

Institute of Management & Technology,Faridabad

Department of Computer Applications(BCA)

Lecture Plan

COURSE:	**Data Communication and Networking**	**CODE:**	**BCA-303**
CLASS:	**5th Sem**	**ACADEMIC YEAR:**	**2025-26**
FACULTY:	**Dr. Rashmeen Kaur**		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
UNIT 1				
1	Introduction to Computer Communications and Networking Technologies; Uses of Computer Networks; Network Devices, Nodes, and Hosts;	T1,R1	2	Chalk & Talk
2	Types of Computer Networks and their Topologies; Network Software:	T1,R1	2	Chalk & Talk
3	Network Design issues and Protocols; Connection-Oriented and Connectionless Services;	T1,R1	1	PPT
4	Network Applications and Application Protocols; Computer Communications and Networking Models: Decentralized and Centralized Systems	T1,R1	2	PPT
5	Distributed Systems, Client/Server Model, Peer-to-Peer Model, Web-Based Model,	T1,R1	1	Chalk & Talk
6	Network Architecture and the OSI Reference Model, TCP/IP reference model	T1,R1	2	PPT
7	Example Networks: The Internet, X.25, Frame Relay, ATM.	T1,R1	1	Chalk & Talk
UNIT 2				
8	Analog and Digital Communications Concepts: Concept of data, signal, channel, bid-rate , maximum data-rate of channel	T1,R1	1	Chalk & Talk
9	Representing Data as Analog Signals, Representing Data as	T1,R1,W2	2	Chalk & Talk
10	Digital Signals, Data Rate and Bandwidth, Capacity, Baud Rate	T1,T2	2	Chalk & Talk
11	Asynchrous and synchrous transmission, data encoding techniques	T1,R1,W3	2	PPT
12	Modulation techniques, Digital Carrier Systems;	T1,R1	1	Chalk & Talk
13	Guided and Wireless Transmission Media	T1,R1	2	Chalk & Talk
14	Communication Satellites; Switching and	T1,R1	2	Chalk & Talk

	Multiplexing			
15	Dialup Networking; Analog Modem Concepts; DSL Service	T1,R1	2	PPT
UNIT 3				
16	Data Link Layer: Framing, Flow Control, Error Control; Error Detection and Correction	T1,W4	2	PPT
17	Sliding Window Protocols; Media Access Control: Random Access Protocols, Token Passing Protocols; Token Ring	T1	2	Chalk & Talk
18	Introduction to LAN technologies: Ethernet, switched Ethernet, VLAN, fast Ethernet, gigabit Ethernet, token ring	T1	2	Chalk & Talk
19	FDDI, Wireless LANs; Bluetooth	T1	2	Chalk & Talk
20	Network Hardware Components: Connectors, Transceivers, Repeaters, Hubs	T1	1	Chalk & Talk
21	Network Interface Cards and PC Cards, Bridges, Switches, Routers, Gateways	T1,R1	2	PPT
UNIT 4				
22	Network Layer and Routing Concepts: Virtual Circuits and Datagrams; Routing Algorithms	T1,R1	2	PPT
23	Flooding, Shortest Path Routing, Distance Vector Routing; Link State Routing	T1,R1,W5	2	Chalk & Talk
24	Hierarchical Routing; Congestion Control Algorithms; Internetworking	T1,R1,W5	2	Chalk & Talk
25	Network Security Issues: Security threats; Encryption Methods; Authentication;	T1,R1	1	
26	Symmetric – Key Algorithms; Public-Key Algorithms	T1,R1	2	Chalk & Talk

Total Lectures: 45

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

[T1] Behrouz A Forouzan, "Data Communications and Networking", McGraw Hill

B. REFERENCE BOOKS:

[R1] Andrew S. Tanenbaum, "Computer Networks", Pearson Education

C. GOOGLE CLASSROOM LINK:

https://classroom.google.com/c/NTQ4NDk4MDk0MTUx?cjc=erxcrsf

DIGITAL CONTENT:

W1 https://docs.microsoft.com/en-us/learn/modules/network-fundamentals/
W2 https://www.geeksforgeeks.org/physics/difference-between-analog-and-digital-signal/
W3 https://www.computer.org/publications/tech-news/trends/synchronous-asynchronous-data-transmission
W4 https://www.geeksforgeeks.org/computer-networks/framing-in-data-link-layer/
W5 https://www.youtube.com/watch?v=1KGC7Tp6HGo

Institute of Management & Technology,Faridabad

Department of Computer Applications (BCA)

Lecture Plan

COURSE:	**VISUAL BASIC**	**CODE:**	**BCA–304**
CLASS:	**BCA Vth Sem**	**ACADEMIC YEAR:**	**2025-26**
FACULTY:	**Dr Rimple Dhamija**		

S. No.	Topic Name	Reference/ Text Book/ Web (R/T/W)	No. Of Lecture	Delivery Method
UNIT-I				
1	Introduction to VB	T1, R1	1	PPT, Chalk & Talk
2	Visual & Non-visual programming	T1, R1	1	Chalk & Talk
3	Procedural programming languages	T1	1	Chalk & Talk
4	Object-oriented programming languages	T2	1	Chalk & Talk
5	Event-driven programming languages	T1	1	Chalk & Talk
6	Visual Development	T1, W1	1	PPT, Chalk & Talk
7	The VB environment: Menu bar, Toolbar	T1	1	PPT, Chalk & Talk
8	Project explorer, Toolbox, Properties window	T1	2	PPT
9	Form designer, Form layout, Immediate window	T1	2	PPT
10	Lab based on above Topics	R1	8	Software Tool
UNIT-II				
11	Basics of Programming, Declaring variables, Types of variables, Converting variables types	T1, R1	3	PPT, Chalk & Talk
12	User-defined data types	T2	1	PPT

13	Forcing variable declaration, Scope & lifetime of variables	T2	2	PPT, Chalk & Talk
14	Constants: Named & intrinsic	T2	1	PPT, Chalk & Talk
15	Operators: Arithmetic, Relational & Logical operators	T2	1	PPT, Chalk & Talk
16	I/O in VB: Various controls for I/O in VB	T2	4	PPT, Chalk & Talk
17	Message box, Input Box, Print statement	T2, R1	1	PPT
18	Lab based on above Topics	R1	8	Software Tool
UNIT-III				
19	Decisions and conditions: If statement, If-then-else, Select-case	T1, R1	1	PPT, Chalk & Talk
20	Looping statements: Do-loops	T1, R1	1	PPT, Chalk & Talk
21	Looping statements: For-next	T1, R1	1	PPT, Chalk & Talk
22	Looping statements: While-wend	T1, R1	1	PPT, Chalk & Talk
23	Looping statements: Exit statement	T1, R1	1	PPT, Chalk & Talk
24	Nested control structures	T1, R1	1	PPT, Chalk & Talk
25	Arrays: Declaring and using arrays	T1, R1	2	PPT, Chalk & Talk
26	One-dimensional and multi-dimensional arrays	T1, R1	1	PPT, Chalk & Talk
27	Static & dynamic arrays	T1, R1	1	PPT, Chalk & Talk
28	Arrays of array	T1, R1	1	PPT, Chalk & Talk
29	Collections: Adding, Removing, Counting, Returning items in a collection, Processing a collection	T1, R1	1	PPT, Chalk & Talk
30	Lab based on above Topics	R1	8	Software Tool
UNIT-IV				
31	Procedures: General & event procedures	T2	1	PPT, Chalk & Talk
32	Subroutines	T2	1	PPT, Chalk & Talk
33	Functions	T2	1	PPT, Chalk & Talk
34	Calling procedures, Arguments- passing mechanisms, Optional arguments, Named arguments	T2	1	PPT, Chalk & Talk
35	Functions returning custom data types, Functions returning arrays	T2	1	PPT, Chalk & Talk
36	Adding multiple forms in VB, Hiding & showing forms, Load & unload statements	T2	1	PPT
37	Creating menu, Submenu, popup menus, Activate & Deactivate events, Form-load event	T2	1	PPT

38	Menu designing in VB, Simple programs in VB	T2	2	PPT
39	Lab based on above Topics	R1	8	Software Tool

Total Lectures: 45 (Theory) + 32 (Practical)

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES

References

A. TEXT BOOKS:

[T1] Visual Basic 6 Programming: Black Book by Steven Holzner, Dreamtech Press
[T2] Mastering Visual Basic 6 by Evangelos Petroutsos, BPB Publications.

B. REFERENCE BOOKS:

[R1] Visual Basic 6: The Complete Reference by Noel Jerke, Mcgraw-Hill Education (India) Ltd

GOOGLE CLASSROOM LINK

https://classroom.google.com/c/Nzk2MjU4MTYyOTI2

C. DIGITAL CONTENT:

[W1] **https://www.vbtutor.net**