



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN (July- DEC 2025)

Name of Teacher: ANISHA

Designation: Assistant professor

Subject Name: ANALOG ELECTRONIC CIRCUITS

Branch: CSE

Semester: 3RD

Subject Code: ESC-301

Date of Start: 23/07/2025

Total Load: 40hrs

Date of Completion: 24/11/2025

Module/Unit-1: DIODE CIRCUITS

S.No	Name of Topic	Hours
1	P-N junction diode	50 MIN
2	I-V characteristics of a diode	50 MIN
3	review of half-wave	50 MIN
4	full-wave rectifiers	50 MIN
5	Zener diodes	50 MIN
6	clamping circuits	50 MIN
7	clipping circuits BJT Structure	50 MIN
	Total	5.8HOURS

Module/Unit 2 BJT CIRCUITS

S.No	Name of Topic	Hours
1	BJT Structure	50 MIN
2	I-V characteristics of a BJT	50 MIN
3	BJT as a switch	50 MIN
4	BJT as an amplifier: small-signal model Biasing circuits, current mirror	50 MIN
5	Biasing circuits, Current mirror	50 MIN
6	common-emitter, common-base and common collector amplifiers	50 MIN
7	Small signal equivalent circuits	50 MIN
8	high-frequency equivalent circuits	50 MIN
	TOTAL	6.67 HOURS

Module/Unit 3 MOSFET CIRCUITS

S.No	Name of Topic	Hours
1	MOSFET structure	50 MIN
2	I-V characteristics	50 MIN
3	MOSFET as a switch	50 MIN
4	MOSFET as an amplifier	50 MIN
5	small-signal model and biasing circuits	50 MIN
6	common-source, common-gate and common-drain amplifiers	50 MIN
7	small signal equivalent circuits - gain, input and output impedances	50 MIN
8	Transconductance	50 MIN
9	high frequency equivalent circuit	50 MIN
	TOTAL	7.5 HOURS

Module/Unit 4 DIFFERENTIAL &OP-APM

1	Differential amplifier; power amplifier	50 MIN
2	direct coupled multi-stage amplifier	50 MIN
3	internal structure of an operational amplifier	50 MIN
4	ideal op-amp, non-idealities in an op-amp (Output offset voltage, input bias current, input offset current, slew rate, gain bandwidth product)	50 MIN
	TOTAL	3.3 HOURS

Module/Unit 5 LINEAR APPLICATIONS OF OP-AMP

1	Idealized analysis of op-amp circuits,	50 MIN
2	Inverting and non-inverting amplifier	50 MIN
3	differential amplifier, instrumentation amplifier	50 MIN
4	integrator, active filter	50 MIN
5	P, PI and PID controllers	50 MIN
6	lead/lag compensator using an op-amp	50 MIN
7	voltage regulator, oscillators (Wein bridge and phase shift	50 MIN
8	Analog to Digital Conversion.	50 MIN
	TOTAL	6.67 HOURS

Module/Unit 6 NON-LINEAR APPLICATIONS OF OP-AMP

1	Hysteretic Comparator, Zero Crossing Detector	50 MIN
---	---	--------

2	Square-wave and triangular-wave generators.	50 MIN
3	Precision rectifier, peak detector. Monoshot	50 MIN
	TOTAL	2.5 HOURS

TEXT BOOKS:

1. Analog Electronics by J B Gupta, Rohit Manglik, et al. | 1 January 2012
2. A Text Book on Analog Electronics: EE/E&T/IN by A. Rajkumar | 1 January 2019.
3. Analog ElectronicsI (Basic Analog Electronics) by J.B. Gupta | 1January 2011.

REFERENCE BOOKS:

1. OP Amp and linear Integrated Circuit by Ramakant A. Gayakwad
- 2 Analog Electronic Circuits for BE by U. A. Bakshi A. P. Godse



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN (July-Dec 2025)

Name of Teacher: Mr. Manoj Kumar Designation: Asstt. Professor

Subject Name: DATA STRUCTURES & ALGORITHMS

Branch: B.Tech-CSE

Semester: 3rd

Subject Code: PCC-CS-301

Date of Start: 23/07/2025

Total Load: 35 hrs

Date of Completion: 24/11/2025

Module/Unit-1: INTRODUCTION

S.No	Name of Topic	Hours
1	Basic Terminologies: Elementary Data Organizations	1
2	Data Structure Operations: insertion, deletion, traversal etc.; Analysis of an Algorithm	1
3	Asymptotic Notations, Time-Space trade off	2
4	Searching: Linear Search and Binary Search Techniques and their complexity analysis.	2
	Total	6

Module/Unit 2- STACKS AND QUEUES

S.No	Name of Topic	Hours
1	ADT Stack and its operations: Algorithms and their complexity analysis	2
2	Applications of Stacks: Expression Conversion and evaluation – corresponding algorithms and complexity analysis	2
3	ADT queue, Types of Queue: Simple Queue	2
4	Circular Queue, Priority Queue; Operations on each types of Queues: Algorithms and their analysis	2
	Total	8

Module/Unit-3: LINKED LISTS

S.No	Name of Topic	Hours
1	Singly linked lists: Representation in memory	1
2	Algorithms of several operations: Traversing, Searching, Insertion into, Deletion from linked list;	2
3	Linked representation of Stack and Queue, Header nodes	1
4	Doubly linked list: operations on it and algorithmic analysis	2
5	Circular Linked Lists: all operations their algorithms and the complexity analysis	1
6	Trees: Basic Tree Terminologies, Different types of Trees: Binary Tree, Threaded Binary Tree	2
7	Binary Search Tree, AVL Tree; Tree operations on each of the trees and their algorithms with complexity analysis	2

8	Applications of Binary Trees, B Tree, B+ Tree: definitions, algorithms and analysis	2
	Total	13

Module/Unit-4: SORTING AND HASHING

S.No	Name of Topic	Hours
1	Objective and properties of different sorting algorithms: Selection Sort	2
2	Bubble Sort, Insertion Sort, Quick Sort, Merge Sort, Heap Sort; Performance and Comparison among all the methods	2
3	Hashing and collision resolution	2
4	Graph: Basic Terminologies and Representations, Graph search and traversal algorithms and complexity analysis	2
	Total	8

TEXT BOOKS and REFERENCE BOOKS:

1. A. M. Tenenbaum, Langsam, Moshe J. Augentem , “*Data Structures using C,*” PHI Pub.
2. A.V. Aho, J.E. Hopcroft and T.D. Ullman, “*Data Structures and Algorithms*” Original edition, Addison-Wesley, 1999, Low Priced Edition.
3. Ellis Horowitz & Sartaj Sahni, “*Fundamentals of Data structures*” Pub, 1983, AW

Kumar
Kumar

Signature of Teacher
Academics

Kumar

Approved by HOD/Dean

Kumar

Approved by IQAC Director/Dean





NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN (July-DEC 2025)

Name of Teacher: ANJALI Designation: Assistant professor Subject Name: DIGITAL ELECTRONIC

Branch: CSE

Semester: 3RD

Subject Code: ESC-302

Date of Start: 23/07/2025

Total Load: 40 hrs

Date of Completion: 24/11/2025

Module/Unit-1

S.No	Name of Topic	Hours
1	BJ Digital signals, digital circuits, AND, OR, NOT, NAND, NOR and Exclusive-OR operations	50 MIN
2	Boolean algebra, examples of IC gates	50 MIN
3	number systems-binary, signed binary, octal hexadecimal number	50 MIN
4	binary arithmetic, one's and two's complements arithmetic	50 MIN
5	codes, error detecting and correcting codes	50 MIN
6	characteristics of digital ICs, digital logic families	50 MIN
7	TTL, Schottky TTL and CMOS logic	50 MIN
8	interfacing CMOS and TTL	50 MIN
9	Tri-state logic T Structure	50 MIN
	Total	7.5HOURS

Module/Unit- 2

S.No	Name of Topic	Hours
1	Standard representation for logic functions, K-map representation, simplification of logic functions using K-map	50 MIN
2	minimization of logical functions.	50 MIN
3	Multiplexer, De-Multiplexer/Decoders	50 MIN
4	Adders, Subtractors, BCD arithmetic	50 MIN
5	carry look ahead adder, serial adder	50 MIN
6	ALU, elementary ALU design, popular MSI chips	50 MIN
7	code converters, priority encoders	50 MIN
8	decoders/drivers for display devices	50 MIN
9	Q-M method of function realization	50 MIN
10	Don't care conditions	50 MIN

	TOTAL	8 HOURS
--	--------------	--------------------

Module/Unit 3

S.No	Name of Topic	Hours
1	A 1-bit memory, the circuit properties of Bistable latch	50 MIN
2	clocked SR flip flop, J- K-T	50 MIN
3	D types flip flops, applications of flip flops	50 MIN
4	shift registers, applications	50 MIN
5	serial to parallel converter, parallel to serial converter	50 MIN
6	ring counter, sequence generator	50 MIN
7	ripple (Asynchronous) counters, synchronous counters	50 MIN
8	counters design using flip flops, special counter IC's	50 MIN
9	asynchronous sequential counters, applications of counters.	50 MIN
	TOTAL	7.5 HOURS

Module/Unit 4

1	weighted resistor/converter, R-2R Ladder D/A converter	50 MIN
2	specifications for D/A converters, examples of D/A converter ICs,	50 MIN
3	sample and hold circuit, analog to digital converters: quantization and encoding	50 MIN
4	parallel comparator A/D converter	50 MIN
5	counting A/D converter, dual slope A/D converter	50 MIN
6	A/D converter using voltage to frequency and voltage to time conversion	50 MIN
7	specifications of A/D converters, example of A/D converter ICs	50 MIN
8	successive approximation A/D converter	50 MIN
	TOTAL	6.6 HOURS

Module/Unit 5

1	Memory organization and operation, expanding memory size	50 MIN
2	classification and characteristics of memories	50 MIN

3	sequential memory, read only memory (ROM), read and write memory(RAM)	50 MIN
4	content addressable memory (CAM), charge de coupled device memory (CCD)	50 MIN
5	commonly used memory chips, ROM as a PLD, Programmable logic array	50 MIN
6	Programmable array logic	50 MIN
7	complex Programmable logic devices (CPLDS)	50 MIN
8	Field Programmable Gate Array (FPGA).	50 MIN
	TOTAL	6.67 HOURS

REFERENCES:

1. R. P. Jain, "Modern Digital Electronics", McGraw Hill Education, 2009.
2. M. M. Mano, "Digital logic and Computer design", Pearson Education India, 2016.
3. A. Kumar, "Fundamentals of Digital Circuits", Prentice Hall India, 2016.



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN (July-Nov 2025)

Name of Teacher: Dr Vishal Chand Goel Designation: Associate Prof

Subject Name: Maths- III

Branch: CSE

Semester: IIIrd

Subject Code: BSC-301

Date of Start: 23/07/2025

Total Load: .36hrs

Date of Completion: 24/11/2025

Module/Unit-1: SEQUENCES AND SERIES

S.No	Name of Topic	Hours
1	convergence of sequence and series	1
2	test for convergence	1
3	power series ,Taylor series	1
4	series or exponential	1
5	trigonometric and logarithmic functions	1
	Total	5

Module/Unit 2-MULTIVARIABLE CALCULUS (DIFFERENTIATION)

S.No	Name of Topic	Hours
1	limit and continuity	1
2	partial derivatives, total derivative	1
3	tangent plane and normal line	1
4	maxima minima and saddle point	1
5	method of Lagrange multipliers	1
6	gradient, curl and divergence	1
	Total	6

Module/Unit 3- MULTIVARIABLE CALCULUS (INTEGRATION)

S.No	Name of Topic	Hours
1	change of order of integration , change of variables	2
2	theorems of green ,gauss and stokes	3
3	orthogonal curvilinear coordinates	1
4	simple application involving cubes ,sphere and rectangular parallelepipeds	1
	Total	8

Module/Unit 4- FIRST ORDER ORDINARY DIFFERENTIAL EQUATIONS

S.No	Name of Topic	Hours
1	exact equation	3
2	linear equation	1
3	linear equation with variable coefficient	1
4	equation not of first degree	1
5	equation solvable for p,x,y	1
6	clairauts type	1
	Total	8

Module/Unit 2-MULTIVARIABLE CALCULUS (DIFFERENTIATION)

S.No	Name of Topic	Hours
1	second order linear differential equation	1
2	second order linear differential equation with variable coefficients	1
3	method of variation of parameters	1
4	Cauchy Euler equations	1
5	Power series solutions	1
6	Legendre polynomials	2
7	Bessel functions of the first kind and their properties	2
	Total	9

TEXT BOOKS:

1. N.P. Bali and Manish Goyal, "*A text book of Engineering Mathematics*",
2. B.S. Grewal, "*Higher Engineering Mathematics*",
3. Ramana B.V., "*Higher Engineering Mathematics*",

REFERENCE BOOKS:

1. W. E. Boyce and R. C. DiPrima, "*Elementary Differential Equations and Boundary Value Problems*,"
- 2 G.B. Thomas and R.L. Finney, "*Calculus and Analytic geometry*"
- 3 Erwin Kreyszig, "*Advanced Engineering Mathematics*
- 4 E. A. Coddington, "*An Introduction to Ordinary Differential Equations*",



Signature of Teacher
Academics

Approved by HOD/Dean

Approved by IQAC Director/Dean



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER ENGINEERING

LESSON PLAN (July-Dec 2025)

Name of Teacher: Ms. Chaman Lata

Designation: Assistant professor

SubjectName: ETC

Branch: CSE

Semester:IIIrd

Subject Code:HSMC-01

Date of Start:21stJuly 2025

Total Load: .36....hrs

Date of Completion: 14 Nov 2025

Module/Unit-1: Reading Skills

S.No	Name of Topic	Hours
1	Comprehension Passages	2
2	Skimming and Scanning	2
3	Note Making & Summarizing	1
4	Analyzing Literary Texts	1
	Total	6

Module/Unit 2 Writing Skills

S.No	Name of Topic	Hours
1	Paragraph Writing	2
2	Essay Writing	2
3	Letter Writing (Formal & Informal)	2
4	Report Writing	2
	Total	8

Module/Unit 3- Grammar & Vocabulary

S.No	Name of Topic	Hours
1	Tenses and Sentence Structure	2

2	Active & Passive Voice	2
3	Direct & Indirect Speech	2
4	Error Detection & Correction	1
5	Vocabulary Building	1
Total		8

Module/Unit - 4 Communication Skills

S.No	Name of Topic	Hours
1	Oral Presentation	2
2	Group Discussion	2
3	Interview Skills	2
4	Listening & Speaking Activities	1
Total		7

Module/Unit 5- Applied English

S.No	Name of Topic	Hours
1	Professional Email Writing	2
2	Notice, Agenda & Minutes Writing	2
3	Resume & Cover Letter Preparation	2
4	Technical Writing & Documentation	1
Total		7

TEXT BOOKS:

Contemporary English Grammar – David Green

2. High School English Grammar & Composition – Wren & Martin

3. Technical Communication – Meenakshi Raman & Sangeeta Sharma



NGF COLLEGE OF ENGINEERING TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN (JULY-DEC 2025)

Name of Teacher: Ms. Nitika

Designation: Assistant professor

Subject Name: Project-1

Branch: B.tech cse, Sec A

Semester: 3rd

Subject Code: proj-cs-301

Date of Start: 21/7/2025

Total Load: 40 Hours

Date of Completion: 21/11/2025

LIST OF PROGRAMS

Name	Mins
Topics / Activities	100
Introduction to Project Lab: Overview of objectives, assessment pattern, project categories (software/hardware/research-based), and guidelines for project selection.	100
Project Ideation & Problem Identification: Brainstorming and group formation. Guidance on selecting innovative and feasible project ideas.	100
Literature Review & Feasibility Study: Discuss how to conduct literature surveys using research databases. Assess technical, financial, and operational feasibility.	100
Project Proposal Presentation (Stage-I): Each team presents their idea, objectives, and feasibility to the faculty for approval.	100
System Design & Architecture: Conceptual and detailed design – DFDs, UML diagrams, block diagrams, or flowcharts.	100
Technology and Tools Finalization: Selection of appropriate software, libraries, frameworks, or hardware components. Installation and environment setup.	100
Module Division and Work Allocation: Breakdown of project into modules; assigning tasks among team members; defining milestones.	100

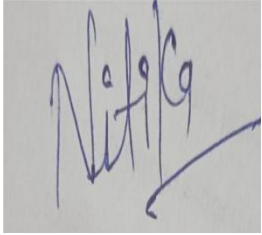
Name	Mins
Implementation Phase – I: Begin coding or hardware assembly of core modules. Faculty supervision and code review.	100
Implementation Phase – II: Continued development of project components. Debugging and integration.	100
Testing and Validation – I: Unit testing of developed modules; discussion on testing techniques and documentation.	100
Testing and Validation – II: System integration testing, validation against requirements, and bug fixing.	100
Project Review (Stage–II Presentation): Progress evaluation through demonstration and presentation before internal review committee.	100
Report Writing and Documentation: Guidance on technical report preparation — abstract, methodology, results, conclusion, references, and formatting standards (IEEE/APA).	100
Final Presentation and Demonstration (Stage–III): Each team demonstrates the final project outcome with presentation slides and live demo.	100
Viva-Voce and Submission: Oral examination, code verification, final report submission (soft + hard copy).	100
Topics / Activities	100
Introduction to Project Lab: Overview of objectives, assessment pattern, project categories (software/hardware/research-based), and guidelines for project selection.	100
Project Ideation & Problem Identification: Brainstorming and group formation. Guidance on selecting innovative and feasible project ideas.	100
Literature Review & Feasibility Study: Discuss how to conduct literature surveys using research databases. Assess technical, financial, and operational feasibility.	100

Text Books / Reference books

Text/ Reference Books:

1 Bjarne Stroustrup, The C++ programming language, Pearsons education

- 2 Robert Lafore, Object oriented programming using C++, PHI
- 3 Paul Deitel & Harvey Deitel, C++ How to program , Pearsons education
4. Yashawant Kanetkar, Let Us C++, BFB



Signature of Teacher



Approved by HOD/Dean



Approved by IQAC Director/Dean Academics



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN (July- DEC 2025)

Name of Teacher: ANISHA

Designation: Assistant professor

Subject Name: ANALOG ELECTRONIC CIRCUITS

Branch: CSE

Semester: 3RD

Subject Code: ESC-303

Date of Start: 23/07/2025

Total Load: 15 hrs

Date of Completion: 24/11/2025

EXPERIMENT NO:1

S.No	Name of Topic	Hours
1	To determine the gain and bandwidth of a CE Amplifier from its frequency response curve.	100 MIN
	Total	1Hr 40 MIN

EXPERIMENT NO: 2

S.No	Name of Topic	Hours
1	To determine the Band width from the frequency response of the common source FET Amplifier	100 MIN
	TOTAL	1Hr 40 MIN

EXPERIMENT NO: 3

S.No	Name of Topic	Hours
1	To study the response of a two stage RC-coupled amplifier and calculate gain and band width.	100 MIN
	TOTAL	1Hr 40 MIN

EXPERIMENT NO: 4

1	Study of V-I Characteristics of a Diode.	100 MIN
	TOTAL	1Hr 40 MIN

EXPERIMENT NO: 5

1	To study and draw the characteristics of half wave and full wave rectifiers.	100 MIN
	TOTAL	1Hr 40 MIN

EXPERIMENT NO: 6

1	Study of Clipping & Clamping circuit	100 MIN
	TOTAL	1Hr 40 MIN

EXPERIMENT NO: 7

1	To study zener diode as voltage regulator.	100 MIN
	TOTAL	1Hr 40 MIN

EXPERIMENT NO: 8

1	Study of Clipping & Clamping circuit	100 MIN
	TOTAL	1Hr 40 MIN

EXPERIMENT NO: 9

1	To study Zener diode characteristics.	100 MIN
	TOTAL	1Hr 40 MIN



Signature of Teacher

Approved by HOD/Dean

Approved by IQAC Director/Dean Academics



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN (July-Dec 2025)

Name of Teacher: ANJALI KAUSHIK

Designation: Assistant professor

Subject Name: DE LAB

Branch: CSE

Semester: 3RD

Subject Code: ESC-304

Date of Start: 23/07/2025

Total Load: 15 hrs

Date of Completion: 24/12/2025

EXPERIMENT-1

S. No	Name of Topic	Hours
1	To study and verify the truth table of logic gates.	100 MIN
	Total	1hr 40 min

EXPERIMENT-2

S.No	Name of Topic	Hours
1	To realize half/full adder and half/full subtractor. i. Using X-OR and basic gates ii. Using only Nand gates.	100 MIN
	TOTAL	1hr 40 min

EXPERIMENT-3

S. No	Name of Topic	Hours
1	To realize IC7483 as parallel adder / Subtractor.	100 MIN
	TOTAL	1hr 40 min

EXPERIMENT-4

S. No	Name of Topic	Hours
1	To convert given binary numbers to gray codes.	100 MIN
	TOTAL	1hr 40 min

EXPERIMENT-5

S. No	Name of Topic	Hours
1	To verify the truth table of multiplexer using 74153 & to verify a demultiplexer using 74139. To study the arithmetic circuits half-adder half Subtractor, full adder and full Subtractor using multiplexer.	100 MIN
	TOTAL	1hr 40 min

EXPERIMENT-6

S. No	Name of Topic	Hours
1	To verify the truth table of MUX and DEMUX using NAND.	100 MIN
	TOTAL	1hr 40 min

EXPERIMENT-7

S. No	Name of Topic	Hours
1	To verify the truth table of one bit and two-bit comparators using logic gates.	100 MIN
	TOTAL	1hr 40 min

EXPERIMENT-8

S. No	Name of Topic	Hours
1	To convert a given octal input to the binary output and to study the LED display using 7447, 7-segment decoder/ driver	100 MIN
	TOTAL	1hr 40 min

EXPERIMENT-9

S. No	Name of Topic	Hours
1	Truth table verification of Flip-Flops: (i) JK Master Slave (ii) D- Type (iii) T- Type.	100 MIN
	TOTAL	1hr 40 min



Signature of Teacher



Approved by HOD/Dean

Approved by IQAC Director/Dean Academics



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN (July-Dec 2025)

Name of Teacher: Mr. Manoj Kumar Designation: Asstt. Professor

Subject Name: DATA STRUCTURES & ALGORITHMS LAB

Branch: B.Tech-CSE

Semester: 3rd

Subject Code: PCC-CS-303

Date of Start: 23/07/2025

Total Load: 23 hrs

Date of Completion: 24/11/2025

Module/Unit-1: INTRODUCTION

S.No	Name of Topic	Hours
1	INTRODUCTION ABOUT DSA SOFTWARE, PROGRAM OF 1-D ARRAY	1
2	PROGRAM OF MULTI-D ARRAY, INSERT ONE ELEMENT IN 1-D ARRAY	1
3	DELETE ONE ELEMENT FROM 1-D ARRAY	1
4	IMPLEMENT LINEAR SEARCH	1
	Total	4

Module/Unit 2- STACKS AND QUEUES

S.No	Name of Topic	Hours
1	Array Implementation of Stack, INSERT AN ELEMENT IN STACK	1
2	DELETE AN ELEMENT FROM THE STACK, SEARCH AN ELEMENT IN STACK	1
3	Array Implementation of Queue, INSERT AN ELEMENT IN QUEUE, DELETE AN ELEMENT FROM THE QUEUE	1
4	SEARCH AN ELEMENT IN QUEUE, PROGRAM OF CIRCULAR QUEUE	1
	Total	4

Module/Unit-3: LINKED LISTS

S.No	Name of Topic	Hours
1	Array Implementation of Circular Queue	1
2	TO Add number of nodes using Linked List, TO Delete the number of nodes using Linked List	1
3	Linked representation of Stack and Queue, Header nodes	1
4	TO Display the number of nodes using Linked List	1
5	TO count the number of nodes using Linked List	1
	Total	5

Module/Unit-4: SORTING AND HASHING

S.No	Name of Topic	Hours
1	PROGRAMMING ON DIFFERENT SORTING IN ONE PROGRAM	1
2	To Implement Binary Search, To Implement Bubble Sort	2
3	To Implement Insertion Sort, To Implement Quick Sort,	2
4	To Implement Heap Sort	2
5	To Implement Merge Sort	1
6	To Implement Radix Sort	1
	Total	10

TEXT BOOKS and REFERENCE BOOKS:

1. A. M. Tenenbaum, Langsam, Moshe J. Augentem , “*Data Structures using C,*” PHI Pub.
2. A.V. Aho, J.E. Hopcroft and T.D. Ullman, “*Data Structures and Algorithms*” Original edition, Addison-Wesley, 1999, Low Priced Edition.
3. Ellis Horowitz & Sartaj Sahni, “*Fundamentals of Data structures*” Pub, 1983, AW

Kumar
Kumar

Signature of Teacher

Kumar

Approved by HOD/Dean

Kumar

Approved by IQAC Director/Dean Academics





NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN (july-dec 2025)

Name of Teacher: Ms.Reetu

Designation: Assistant Professor

Subject Name: IT MATLAB

Branch: Computer Science

Semester: B.tech 3RD sem

Subject Code: (PCC- CS-302)

Date of Start: 21 July 2025

Total Load: 55 hr

Date of Completion: 21 Nov. 2025

Module/Unit-1: Introduction

S.No	Name of Topic	Hours
1	Introduction to MATLAB	100
2	Data types and variables	100
3	Inter-conversion of Data types,	100
4	MATLAB Variables	100
5	Keywords and Constant	100
6	Session Command.	100
7	MATLAB Operators and Operations: Operators (Arithmetic, Relational, Logical, Bitwise),	100
8	Set Operations	100
9	Operator Precedence,	100
10	Mathematical Functions.	100

	Total	16 hr 40 min
--	--------------	-----------------

Module/Unit 2- PROGRAMMING IN MATLAB

S.No	Name of Topic	Hours
1	Decision Making	100
2	Script and Function	100
3	Loops,	100
4	branches, Functions,	100
5	Working on Script File (Creating, Saving and Executing),	100
6	MATLAB I/O	100
7	Formatted I/O Method,.	100
	Total	11hr 40 MIN

Module/Unit 3- ARRAYS AND GRAPHICS

S.No	Name of Topic	Hours
1	Introduction to Matrices	100
2	Operations on Arrays/Matrices	100
3	Manipulations of Arrays/Matrices,	100
4	Expansion of Matrix Size,	100
5	Reduction of Matrices/Arrays order	100
6	Introduction to plot,	100

7	Basic 2-D Plots(Style options, Labels, Axis control, etc.),	100
8	specialized 2-D Plots	100
9	drawing multiple plots.	100
10	Using MATLAB for fractals and chaos and Conway game of life	100
	Total	16 hr 40 min

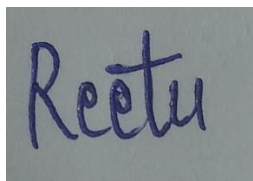
Module/Unit 4- : FILE HANDLING AND DEBUGGING

S.No	Name of Topic	Hours
1	Introduction to file handling	100
2	working on files,	100
3	accessing of Text File	100
4	Saving/ Loading MATLAB Variables	100
5	reading data without opening file,	100
6	reading and writing Excel.	100
	Total	10 hr

TEXT BOOKS:

1. Delores M. Etter, David C. Kuncicky, Holly Moore, “Introduction to MATLAB 7.0”, Pearson, 2013.
2. Rudra Pratap, “Getting Started with MATLAB”, OXFORD University Press, 2010.
3. Agam Kumar Tyagi, “MATLAB and Simulink for Engineers”, University Press,

2012.

A square image showing a handwritten signature in blue ink. The signature is written in a cursive style and appears to be the name 'Reetu'. The background of the image is a solid grey color.

**Signature of Teacher
Academics**

Approved by HOD/Dean

Approved by IQAC Director/Dean



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

LESSON PLAN(July-Dec 2025)

Name of Teacher:Meenu Rani

Designation: AP

Subject Name: S&S

Branch: CSE

Semester:5TH

Subject Code:ESC501

Date of Start: 21/07/2025

Total Load: .15hrs

Date of Completion: 14/11/2025

Module/Unit-1: INTRODUCTION TO SIGNALS AND SYSTEMS.

S.No	Name of Topic	Hours
1	Signals and systems as seen in everyday life,	50MIN
2	Signal properties: periodicity, absolute integrability, determinism and stochastic character	50MIN
3	Some special signals of importance: the unit step, the unit impulse, the sinusoid, the complex exponential, some special time-limited signals	50MIN
4	continuous and discrete time signals, continuous and discrete amplitude signals. System properties: linearity: additivity and homogeneity, shift invariance, causality, stability, realizability. Examples	50MIN
	Total	200MIN=3.3HRS

Module/Unit 2-. BEHAVIOR OF CONTINUOUS AND DISCRETE-TIME LTI SYSTEMS

S.No	Name of Topic	Hours
1	Impulse response and step response, convolution, input-output behavior with aperiodic convergent inputs, cascade interconnections.	50MIN
2	Characterization of causality and stability of LTI systems. System representation through differential equations and difference equations. State space Representation	50MIN
3	State-Space Analysis, Multi-input, multi-output representation. State Transition Matrix and its Role.,	50MIN
4	Periodic inputs to an LTI system, the notion of a frequency response and its relation to the impulse response.	50MIN
5	Impulse response and step response, convolution, input-output behavior with aperiodic convergent inputs, cascade interconnections.	50MIN

6	Characterization of causality and stability of LTI systems. System representation through differential equations and difference equations. State space Representation	50MIN
7	Representation of systems. State-Space Analysis, Multi-input, multi-output representation.	50MIN
8	State Transition Matrix and its Role.	50MIN
9	Periodic inputs to an LTI system, the notion of a frequency response and its relation to the impulse response.	50MIN
	Total	450MIN=7.5HRS

Module/Unit 3 – FOURIER TRANSFORM AND Z- TRANSFORM

S.No	Name of Topic	Hours
1	Fourier series representation of periodic signals,	50MIN
2	Waveform Symmetries, Calculation of Fourier Coefficients	50MIN
3	Fourier Transform, convolution/multiplication and their effect in the frequency domain, magnitude and phase response,	50MIN
4	Fourier domain duality. The Discrete Time Fourier Transform(DTFT)	50MIN
5	Discrete Fourier Transform (DFT). Parseval's Theorem.	50MIN
6	Review of the Laplace Transform for continuous time signals and systems, system functions, poles and zeros of system functions and signals,	50MIN
7	Laplace domain analysis, solution to differential equations and system behavior.	50MIN
8	The z-Transform for discrete time signals and systems, system functions, poles and zeros of systems and sequences, z-domain analysis.	50MIN
	Total	400MIN=6.67HRS

Module/Unit 4- SAMPLING AND RECONSTRUCTION

S.No	Name of Topic	Hours
1	The Sampling Theorem and its implications	50MIN
2	Spectra of sampled signals.	50MIN
3	Reconstruction: ideal interpolator, zero-order hold, first-order hold.	50MIN

4	Aliasing and its effects. Relation between continuous and discrete time systems.	50MIN
5	Introduction to the applications of signal and system theory	50MIN
6	Modulation for communication, filtering, feedback control systems	50MIN
	Total	300MIN=5HRS

REFERENCES:

1. A. V. Oppenheim, A. S. Willsky and S. H. Nawab, "Signals and systems", Prentice Hall India, 1997.
2. J. G. Proakis and D. G. Manolakis, "Digital Signal Processing: Principles, Algorithms, and Applications", Pearson, 2006.
3. H. P. Hsu, "Signals and systems", Schaum's series, McGraw Hill Education, 2010.
4. S. Haykin and B. V. Veen, "Signals and Systems", John Wiley and Sons, 2007.
5. A. V. Oppenheim and R. W. Schaffer, "Discrete-Time Signal Processing", Prentice Hall, 2009.
6. M. J. Robert "Fundamentals of Signals and Systems", McGraw Hill Education, 2007.
7. B. P. Lathi, "Linear Systems and Signals", Oxford University Press, 2009



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

LESSON PLAN (July-Dec 2025)

Name of Teacher: Bhawna Aggarwal Designation: A.P

Subject Nam: DBMS

Branch: B.Tech CSE

Semester: 5th

Subject Code: PCC-CS-501

Date of Start: 21/7/2025

Total Load: 44 hrs.

Date of Completion: 14/11/2025

Module 1

S.No	Name of Topic	Hours
1	Data Abstraction, Independence	50 Min
2	DDL,DML	50 Min
3	E-R Model,	50 Min
4	Network Model, Relational & Object oriented Model	50 Min
5	Integrity Constraints	50 Min
6	Data Manipulation Operations	50 Min
7.	Revision	50 Min
	Total	5.8

Module 2

S.No	Name of Topic	Hours
1	Relational Algebra	100 Min
2	Tuple and domain relational Calculus	100 Min
3	SQL3, DDL, DML Constructs	50 Min
4	Open Source and Commercial Databases	50 Min
5	Domain and Data dependency	100 Min
6	Armstrong's Axiom	50 Min
7	Normal Forms	100 Min
8	Dependancy Preservation	50 Min
9	Lossless Design	50 Min
10	Evaluation of relational algebra Expressions	50 Min
11	Query Equivalence	50 Min
12	Join Strategies	50 Min
13	Revision	50 Min
	Total	14.2

Module 3

S.No	Name of Topic	Hours
1	Indices	100 Min
2	B Trees	100 Min
3	Hashing	100 Min
4	Revision	50 Min
	Total	5.8

Module 4

S.No	Name of Topic	Hours
1	Concurrency Control	50 Min
2	ACID Properties	50 Min
3	Serializability of scheduling	50 Min
4	Locking and timestamp based schedulers	100 Min
5	Multiversion and optimistic concurrency control schemes	100 Min
6	Database Recovery	50 Min
7	Revision	50 Min
	Total	7.5

Module 5

S.No	Name of Topic	Hours
1	Authentication	50 Min
2	Authorization & Access Control	50 Min
3	DAC,MAC and RBAC Models	50 Min
4	Intrusion Detection	50 Min
5	SQL Injection	50 Min
6	Revision	50 Min
	Total	5

Module 6

S.No	Name of Topic	Hours
1	Object oriented and object relational Databases	50 Min
2	Logical databases	50 Min
3	Web databases	50 Min
4	Distributed Databases	50 Min

5	Data Warehousing	50 Min
6	Data Mining	50 Min
7	Revision	50 Min
	Total	5.8

REFERENCES:

1. “Database System Concepts”, 6th Edition by Abraham Silberschatz, Henry F. Korth, S. Sudarshan, McGraw-Hill.
2. “Principles of Database and Knowledge – Base Systems”, Vol 1 by J. D. Ullman, Computer Science Press.
3. “Fundamentals of Database Systems”, 5th Edition by R. Elmasri and S. Navathe, Pearson Education

Bhawna Aggarwal

Signature of Teacher

[Signature]

Approved by HOD/Dean

[Signature]



Approved by IQAC Director/Dean Academics



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN (JULY-DEC 2025)

Name of Teacher: Anuradha Designation: Assistant prof.
LANGUAGES, AUTOMATA AND COMPILER DESIGN

Subject Name: : FORMAL

Branch: B.Tech

Semester: 5th

Subject Code: PCC-CS-502

Date of Start: 27-07-2025

Total Load:34 hr

Date of Completion: 15-11-2025

Module1: FORMAL LANGUAGES AND AUTOMATA THEORY

S.No	Name of Topic	Hours
1	Alphabet, languages and grammars	50min
2	productions and derivation	50min
3	Chomsky hierarchy of languages	50min
4	Regular Expression	50min
5	Finite Automata: Deterministic Finite Automata (DFA)	50min
6	Nondeterministic Finite Automata (NFA)	50min
7	Context-free grammars (CFG) and languages (CFL),	50min
8	Ambiguity in CFG	50min
9	Chomsky and Greibach normal forms	50min
10	Nondeterministic and deterministic pushdown automata (PDA)	50min
11	Introduction to Context-sensitive languages and linear bounded automata	50min
12	Introduction to Turing machines.	50min
13	DFA, regular expression and CFG practice	50min
14	Chomsky and Greibach normal forms practice	50min
	Total	11hr

MODULE 2- COMPILER DESIGN-ANALYSIS

S.No	Name of Topic	Hours
1	Phases of compilation and overview	50min
2	Lexical Analysis (scanner): scanner generator (lex, flex).	50min
3	Syntax Analysis (Parser)	50min
4	ambiguity LL(1) grammars	50min
5	top-down parsing	50min
6	operator precedence parser	50min
7	bottom up parsing: LR(0)	50min
8	SLR(1)	50min

9	LR(1)	50min
10	LALR(1)	50min
11	Semantic Analysis	50min
12	Attribute grammars	50min
13	syntax directed definition,	50min
14	evaluation and flow of attribute in a syntax tree.	50min
15	Revision	50min
	Total	10 hr

MODULE 3: COMPILER DESIGN SYNTHESIS

S.No	Name of Topic	Hours
1	Symbol Table: Its structure	50min
2	symbol attributes and management.	50min
3	intermediate Code Generation	50min
4	Translation of different language features	50min
5	different types of intermediate forms	50min
6	Intermediate code optimization.	50min
7	Machine code Generation and optimization	50min
8	Instruction scheduling (for pipeline)	50min
9	loop optimization (for cache memory)	50min
10	Register allocation	50min
11	target code generation.	50min
12	Revision	50min
	Total	13 hr

TEXT BOOKS:

1. John E. Hopcroft, Rajeev Motwani and Jeffrey D. Ullman, Introduction to Automata Theory, Languages, and Computation, Pearson Education Asia.
2. John Martin, Introduction to Languages and The Theory of Computation, Tata McGraw Hill. Harry R. Lewis and Christos H. Papadimitriou, Elements of the Theory of Computation, Pearson Education Asia.

REFERENCE BOOKS:

- 1 A.V. Aho, M.S. Lam, R. Sethi, and J.D. Ullman, Compilers: Principles, Techniques, and Tools, Pearson Education, 2007 (second ed.).



Anuradha

Signature of Teacher

A handwritten signature in black ink, appearing to be 'Rama', written on a light yellow rectangular background.

Approved by HOD/Dean

Approved by IQAC Director/Dean Academics



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

LESSON PLAN (JULY-NOV 2025)

Name of Teacher: Ms.Sakshi

Designation: Asst. Prof.

SubjectName: BIOLOGY

Branch: B .TECH CSE

Semester: 5TH

Subject Code: BSC-01

Date of Start: 21-07-25

Total Load: 28.hrs

Date of Completion: 14-11-2025

Module/Unit-1: INTRODUCTION.

S.No	Name of Topic	Hours
1	Bring out the fundamental differences between science and engineering by drawing a comparison between eye and camera, Bird flying and aircraft.	50 Min
2	Why we need to study biology?	50 Min
3	Discuss how biological observations of 18th Century that lead to major discoveries.	50 min
4	Brownian motion and the origin of thermodynamics by referring to the original observation of Robert Brown and Julius Mayor. These examples will highlight the fundamental importance of observations in any scientific Inquiry	50 min
	Total	3hrs 20 min

Module/Unit 2-CLASSIFICATION ..

S.No	Name of Topic	Hours
1	Discuss classification based on (a) cellularity- Unicellular or multicellular (b) ultrastructure- prokaryotes or eucaryotes. (c) energy and Carbon utilisation -Autotrophs heterotrophs, lithotrophs (d) Ammonia excretion - aminotelic, uricotelic, ureotelic (e) Habitata aquatic or terrestrial (e) Molecular taxonomy- three major kingdoms of life. A given organism can come under different category based on classification.	50 Min
2	. Model organisms for the study of-biology come from different groups. E.coli, S.cerevisiae, D. Melanogaster, C. elegans, A. Thaliana, M. Musculus.	50 Min

	Total	1hr40min

Module/Unit 3 Genetics..

S.No	Name of Topic	Hours
1	Mendel's laws, Concept of segregation and independent assortment. Concept of allele. Gene mapping. Gene interaction, Epistasis.	50 min
2	Meiosis and Mitosis be taught as a part of genetics. Emphasis to be give not to the mechanics of cell division nor the phases but how genetic material passes from parent to offspring. Concepts of recessiveness and dominance.	50 min
3.	Concept of mapping of phenotype to genes. Discuss about the single gene disorders in humans. Discuss the concept of complementation using human genetics.	50 min
	Total	2hr 30 min

Module/Unit 4 BIO MOLECULES ..

S.No	Name of Topic	Hours
1	Molecules of life. In this context discuss monomeric units and polymeric structures. Discuss about sugars, starch and cellulose.	50 Min
2	Amino acids and proteins. Nucleotides and DNA/RNA. Two carbon units and lipids.	50 Min
	Total	1hr 40 min

Module/Unit 5 ENZYMES ..

S.No	Name of Topic	Hours
1	Enzymology: How to monitor enzyme catalysed reactions. How does an enzyme catalyse reactions? Enzyme classification. Mechanism of enzyme action.	50 Min
2	Discuss at least two examples. Enzyme kinetics and kinetic parameters. Why should we know these parameters to understand biology? RNA catalysis.	50 Min
	Total	1hr 40 min

Module/Unit 6 INFORMATION TRANSFER .

S.No	Name of Topic	Hours
1	Molecular basis of information transfer. DNA as a genetic material. Hierarchy of DNA structure-from single stranded to double helix to nucleosomes	50 Min
2	Concept of genetic code. Universality and degeneracy of genetic code. Define gene in terms of complementation and recombination.	50 Min
	Total	1hr 40 min

Module/Unit 7- MACROMOLECULAR ANALYSIS ..

S.No	Name of Topic	Hours
1	Proteins- structure and function. Hierarch in protein structure. Primary secondary, tertiary and quaternary structure.	50 Min
2	Proteins as enzymes, transporters, receptors and structural elements.	50 Min
	Total	1hr 40 min

Module/Unit 8 METABOLISM..

S.No	Name of Topic	Hours
1	Thermodynamics as applied to biological systems. Exothermic and endothermic versus endergonic and exergonic reactions. Concept of ΔG and its relation to standard free energy. Spontaneity. ATP as an energy currency.	50 Min
2	This should include the breakdown of glucose to $\text{CO}_2 + \text{H}_2\text{O}$ (Glycolysis and Krebs cycle) and synthesis of glucose from CO_2 and H_2O (Photosynthesis). Energy yielding and energy consuming reactions. Concept of Energy Charge.	50 Min
	Total	1hr 40 min

Module/Unit 9 MICROBIOLOGY..

S.No	Name of Topic	Hours
1	Concept of single celled organisms. Concept of species and strains. Identification and classification of microorganisms.	50 Min
2	Microscopy. Ecological aspects of single celled organisms. Sterilization and media compositions. Growth kinetics.	50 Min
	TOTAL	1hr 40 min

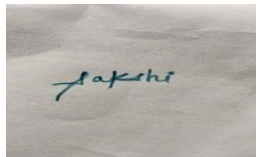
TEXT BOOKS:

1. BIOLOGY FOR ENGINEERS
2. PATH FINDER
3. MODERN PUBLICATION

REFERENCE BOOKS:

- 1.BIOLOGY FOR ENGINEERS BY RAJIV SINGAL.GAURAV AGGARWAL.RITU BIR
- 2 BIOLOGY FOR ENGINEERS BY RAJENDRA SINGH C AND RATHNAKAR RAO N
- 3 BIOLOGY FOR ENGINEERS BY SOHINI SINGH AND TANU ALLEN

Signature of Teacher



Approved by HOD/Dean



Approved by IQAC Director/Dean Academics





NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

LESSON PLAN (July-Dec 2025)

Name of Teacher: NITIKA

Designation: Assistant professor

Subject Name: ACA

Branch: CSE

Semester: 5TH

Subject Code: PEC-CS-S-501

Date of Start: 25/07/2025

Total Load: ...35hr

Date of Completion: 13/12/2025

Module/Unit-1:

S.No	Name of Topic	Hours
1	Some definition and terms	50 MIN
2	Interpretation and microprogramming	50 MIN
3	Basic data types	50 MIN
4	Instructions set (L/S, R/M, R+M architecture)	50 MIN
5	instructions Classes	50 MIN
6	Mnemonics, Conventions	50 MIN
7	Computer Architectural	50 MIN
8	Architectural Classification schemes	50 MIN
9	Flynn's Classification	50 MIN
10	System attributes to performance	50 MIN
	Total	8.3 HOURS

Module/Unit 2

S.No	Name of Topic	Hours
1	Conditions of parallelism,	50 MIN
2	Data and resource Dependences,	50 MIN
3	Hardware and software parallelism,	50 MIN
4	Program partitioning and scheduling,	50 MIN
5	Grain Size and latency,	50 MIN
6	Program flow mechanisms,	50 MIN
7	Control flow versus data flow,	50 MIN
8	Data flow Architecture,	50 MIN
9	Demand driven mechanisms,	50 MIN
10	Comparisons of	50 MIN

	flow mechanisms.	
11	Introduction to Data level-parallelism- SIMD and Vector,	50 MIN
12	Introduction to Thread- level parallelism-	50 MIN
13	Symmetric and shared memory architectures,	50 MIN
14	Symbolic processors.	50MIN
	Total	11.6 HOURS

Module/Unit 3

S.No	Name of Topic	Hours
1	Basic Notion	50 MIN
2	Cache Organization (direct, associative, set-associative and sectored)	50 MIN
3	Write policies and Strategies for replacement	50 MIN
4	Introduction to different types of caches- Split I and D-Caches	50 MIN
5	On chip caches	50 MIN
6	Two level Caches	50 MIN
	TOTAL	5 HOURS

Module/Unit 4

S.No	Name of Topic	Hours
1	The physical memory	50 MIN
2	memory module	50 MIN
3	error detection and correction	50 MIN
4	memory buffer	50 MIN
5	partitioning the address space	50 MIN
6	models of simple memory processor interaction (Heller man's)	50 MIN
7	Striker's, Rau's memory hierarchy Technology ,inclusion,	50 MIN
8	coherence and locality	50 MIN
9	Interleaved memory organization Virtual memory technology:	50 MIN
10	Models, TLB	50 MIN
11	Paging and segmentation	50 MIN
12	Memory replacement policies.	50 MIN

	TOTAL	10 HOURS
--	--------------	---------------------

REFERENCES:

1. Advance computer architecture by Kai Hwang , TMH, ed 2001.
2. Pipelined and Parallel processor design by Michael J. Fiynn – 1995, Narosa.
3. Computer Architecture A Quantitative Approach, John L Hennessey and David A Patterson, Morgan Kaufmann/ Elsevier, Fifth Edition, 2012.

Signature of Teacher

Approved by HOD/Dean

Approved by IQAC Director/Dean Academics



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

LESSON PLAN (July-Dec 2025)

Name of Teacher: Yogita Sharma Designation: A.P

Subject Nam: UHV

Branch: B.Tech CSE

Semester: 5th

Subject Code: HSMC (H-102)

Date of Start: 21/7/2025

Total Load: 44 hrs.

Date of Completion: 14/11/2025

Module 1

S.No	Name of Topic	Hours
1	Purpose and motivation for the course, recapitulation from Universal Human Values	50 Min
2	Self-Exploration, Experiential Validation- as the process for self-exploration	50 Min
3	Continuous Happiness and Prosperity- A look at basic Human Aspirations	50 Min
4	Understanding Happiness and Prosperity correctly	50 Min
5	A critical appraisal of the current scenario	50 Min
6	Living in Harmony at Various Levels	50 Min
7.	Revision	50 Min
	Total	5.8

Module 2

S.No	Name of Topic	Hours
1	Understanding human being as a co-existence of the sentient 'I' and the material 'Body	100 Min
2	Understanding the needs of Self ('I') and 'Body' - happiness and physical facility	100 Min
3	Understanding the characteristics and activities of 'I' and harmony in 'I'	50 Min
4	Programs to ensure Sanyam and Health	50 Min
5	Understanding the Body as an instrument of 'I'	100 Min
6	Revision	50 Min
7	Meaning of Prosperity in detail	100 Min
8	Differentiate between prosperity and accumulation	50 Min

9	Program for ensuring health vs dealing with disease	50 Min
10	Understanding the Body as an instrument of 'I'	50 Min
11	Group Discussion	50 Min
12	Understanding values in human-human relationship; meaning of Justice	50 Min
13	Revision	50 Min
	Total	14.2

Module 3

S.No	Name of Topic	Hours
1	Understanding the meaning of Trust; Difference between intention and competence	100 Min
2	Understanding the meaning of Respect, Difference between respect and differentiation; the other salient values in relationship	100 Min
3	Understanding the harmony in the society (society being an extension of family)	100 Min
4	Visualizing a universal harmonious order in society	50 Min
	Total	5.8

Module 4

S.No	Name of Topic	Hours
1	Understanding the harmony in the Nature	50 Min
2	Understanding Existence as Co-existence of mutually interacting units in all-pervasive space	50 Min
3	Holistic perception of harmony at all levels of existence	50 Min
4	Pollution, depletion of resources and role of technology etc.	100 Min
5	Human being as cause of imbalance in nature	100 Min
6	Moral Values	50 Min
7	Revision	50 Min
	Total	7.5

Module 5

S.No	Name of Topic	Hours
1	Natural acceptance of human values	50 Min
2	Definitiveness of Ethical Human Conduct	50 Min
3	Basis for Humanistic Education, Humanistic Constitution and Humanistic Universal Order	50 Min
4	Competence in professional ethics	50 Min
5	Case studies of typical holistic technologies, management models and production systems	50 Min
6	Strategy for transition from the present state to Universal Human Order & Revision	50 Min
	Total	5

REFERENCES:

1. Jeevan Vidya: Ek Parichaya, A Nagaraj, Jeevan Vidya Prakashan, Amarkantak, 1999.
2. Human Values, A.N. Tripathi, New Age Intl. Publishers, New Delhi, 2004.
3. The Story of Stuff (Book).
4. The Story of My Experiments with Truth - by Mohandas Karamchand Gandhi
5. Small is Beautiful - E. F Schumacher.
6. Slow is Beautiful - Cecile Andrews
7. Economy of Permanence - J C Kumarappa
8. Bharat Mein Angreji Raj - PanditSunderlal
9. Rediscovering India - by Dharampal
10. Hind Swaraj or Indian Home Rule - by Mohandas K. Gandhi
11. India Wins Freedom - Maulana Abdul Kalam Azad
12. Vivekananda - Romain Rolland (English)
13. Gandhi - Romain Rolland (English)

Signature of Teacher

Approved by HOD/Dean

Approved by IQAC Director/Dean Academics





NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

LESSON PLAN (July-Dec 2025)

Name of Teacher: Ms. Uma Designation: Asst. Professor Subject Name: Object Oriented Programming

Branch: CSE Semester: 5th

Subject Code: PCC-CS-503

Date of Start: 15/7/2024 Total Load: 30hrs 20 min

Date of Completion: 22/11/2024

Module/Unit-1: ABSTRACT DATA TYPES

S.No	Name of Topic	Hours
1	Decomposition & Abstraction, Abstraction Mechanisms – parameterization	1 Hour 40 min
2	specification, Kind of Abstractions – Procedural, Data, Type hierarchies	50 min
3	Iteration. ADT implementation - Concrete state space, concrete invariant, abstraction function	50 min
4	Implementing operations, illustrated by the Text example	50 min
	Total	4 Hour 30 min

Module/Unit 2- FEATURES OF OBJECT-ORIENTED PROGRAMMING

S.No	Name of Topic	Hours
1	Encapsulation, object identity, polymorphism – Inheritance in OO design	1 Hour 40 min
2	Implementing OO language features.- Classes, Objects and variables, Type Checking	2 Hour 30 min
3	Procedures - Commands as methods and as objects, Exceptions	50 min
4	Polymorphic procedures, Templates, Memory management	50 min
	Total	5 Hour 50 min

Module/Unit 3- DESIGN PATTERNS

S.No	Name of Topic	Hours
1	Introduction and classification, Creational Pattern – Abstract Factory Pattern	1 Hour 40 min
2	Factory Method, Singleton, Structural Pattern – Bridge	1 Hour 40 mins

3	Flyweight, Behavioural Pattern - The iterator pattern	1 Hour 40 mins
4	Observer pattern, Model-view-controller pattern	2 Hour 30 mins
	Total	7 hour 30

Module/Unit 4- GENERIC TYPES AND COLLECTIONS

S.No	Name of Topic	Hours
1	Simple Generics, Generics and Subtyping, Wildcards, Generic Methods, Set Interface	2 Hour 30 min
2	List Interface, Queue Interface, Deque Interface	2 Hour 30 min
3	Map Interface, Object Ordering, SortedSet Interface, SortedMap Interface	2 Hour 30 min
	Total	7 Hour 30 min

Module/Unit 5: GUI. GRAPHICAL PROGRAMMING WITH SCALA AND SWING

S.No	Name of Topic	Hours
1	Swing components, Laying out components in a container	1 Hour 40 min
2	Panels, Look & Feel, Event listener, concurrency in swing.	1 Hour 40 min
	Total	3 Hour 20 min

Module/Unit 6- THE SOFTWARE DEVELOPMENT PROCESS

S.No	Name of Topic	Hours
1	Requirement specification and analysis, Data Model, Design, Implementation, Testing	1 Hour 40 min
	Total	1 Hour 40 min

TEXT BOOKS:

1. "Object-Oriented Software Construction" by Bertrand Meyer
2. "Clean Code" by Robert C. Martin (Uncle Bob)
3. "Head First Object-Oriented Analysis and Design" by Brett McLaughlin et al.

REFERENCE BOOKS:

1. **Barbara Liskov, *Program Development in Java*, Addison-Wesley, 2001**

Signature of Teacher

Approved by HOD/Dean

Approved by IQAC Director/Dean Academics



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (July-Dec 2025)

Name of Teacher: Ms.Priyanka

Designation: Assistant Professor

SubjectName: Constitution of India

Branch: CSE

Semester: 5th

Subject Code: MC01

Date of start: 21/07/2025

Total load: 24 hours

Date of complete: 14/11/25

Module/Unit-1: Introduction of Constitution

S.No	Name of Topic	Hours
1	Introduction to Constitution of India	50 mins
2	Meaning of Constitution laws and constitutionalism	100mins
3	Historic perspective of the Constitution of India	100 mins
4	Salient features and characteristics of Indian Constitution	100mins
5	Fundamental rights	50mins
	Total	400 mins

Module/Unit 2- federal structure of Indian Constitution

S.No	Name of Topic	Hours
1	fundamental duties	50 mins
2	centre state relations	50mins
3	Emergency provisions	50 mins
4	Directive principles of state policy	50 mins
5	Union executive	50 mins

6	State executive	50 mins
7	Powers of Indian parliament	100mins
8	Constitutional amendments	100mins
9	Historic perspective of Constitutional amendments in india	50 mins
10	powers of president	50 mins
	TOTAL	600 mins

Module/Unit-3: local self government

S.No	Name of Topic	Hours
1	Introduction to panchayati raaj 1993	50mins
2	Municipalities	50mins
3	Structure of local government	50mins
	Total	150 mins

Module/Unit-4

S.No	Name of Topic	Hours
1	Scheme of the fundamental right to equality	50 mins
2	Scheme of the fundamental right to equality under article 19	100mins
3	Scope of the right to life	50 mins

4	Scope of the right to personal liberty	50 mins
5	Article 21	50 mins
	Total	300mins

Signature of Teacher

Approved by HOD/Dean

Approved by IQAC Director/Dean Academics



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

LESSON PLAN (July-Dec 2025)

Name of Teacher: AASHISH

Designation: A.P

Subject Name: Project -III

Branch: B.Tech CSE

Semester: 5th

Subject Code: PROJ-CS-501

Date of Start: 21/7/2025

Total Load: 21hrs.

Date of Completion: 14/11/2025

S.No	Activities	Hours
1	Introduction to Project Lab: Overview of objectives, assessment pattern, project categories (software/hardware/research-based), and guidelines for project selection.	100 Min
2	Project Ideation & Problem Identification: Brainstorming and group formation. Guidance on selecting innovative and feasible project ideas	50 Min
3	Literature Review & Feasibility Study: Discuss how to conduct literature surveys using research databases. Assess technical, financial, and operational feasibility,	100 Min
4	Project Proposal Presentation (Stage-I): Each team presents their idea, objectives, and feasibility to the faculty for approval.	100 Min
5	System Design & Architecture: Conceptual and detailed design – DFDs, UML diagrams, block diagrams, or flowcharts	50 Min
6	Technology and Tools Finalization: Selection of appropriate software, libraries, frameworks, or hardware components. Installation and environment setup	100 Min
7.	Module Division and Work Allocation: Breakdown of project into modules; assigning tasks among team members; defining milestones.	100 Min
8.	Implementation Phase – I: Begin coding or hardware assembly of core modules. Faculty supervision and code review.	100 Min
9.	Implementation Phase – II: Continued development of project components. Debugging and integration.	100 Min
10.	Testing and Validation – I: Unit testing of developed modules; discussion on testing techniques and documentation.	100 Min

	Testing and Validation – II: System integration testing, validation against requirements, and bug fixing.	
11	Project Review (Stage-II Presentation): Progress evaluation through demonstration and presentation before internal review committee.	100 Min
12	Report Writing and Documentation: Guidance on technical report preparation — abstract, methodology, results, conclusion, references, and formatting standards	100 Min
13	Final Presentation and Demonstration (Stage-III): Each team demonstrates the final project outcome with presentation slides and live demo.	100 Min
14	Viva-Voce and Submission: Oral examination, code verification, final report submission (soft + hard copy).	50 Min
	TOTAL	21 Hours

References:

- Pressman, R. S. Software Engineering: A Practitioner's Approach.
- Ian Sommerville, Software Engineering.
- Project development manuals provided by the department.
- IEEE standards for documentation and testing.

Signature of Teacher

Approved by HOD/Dean

Approved by IQAC Director/Dean Academics





NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING



LESSON PLAN (JUNE-DEC 2025)

Name of Teacher: Anuradha Designation: Assistant Professor Subject Name Database management system lab

Branch: B. Tech

Semester: 5th

Subject Code: PCC-CS- 504

Date of Start:27-07-2025 Total Load:27 hours 20 min Date of Completion: 15-11-25

S.No	Name of Experiments	Hours
1	Design of E-R Model and Conversion into Relational Schema for a University Database	100 min
2	To demonstrate the use of DDL commands in SQL such as CREATE, ALTER, TRUNCATE, and DROP on a sample Students table	100 min
3	To demonstrate the use of DML (Data Manipulation Language) commands like	100 min
3.1	INSERT, UPDATE, and DELETE on a sample table.	100min
4	Write Use of SQL Special Operators (IN, BETWEEN, IS NULL, EXISTS, ANY, ALL)	100 min
5	Write Use of Aggregate Functions (COUNT, SUM, AVG, MAX, MIN, GROUP BY, HAVING)	100 min
6	Write Use of SQL Built-in Functions (String, Date/Time, Math, Numeric)	100 min
7	Write Use of SQL Joins (INNER, LEFT, RIGHT, FULL)	100 min
8	Writing nested subqueries and correlated subqueries for advanced filtering and analysis using SQL.	100 min
9	Write DCL and TCL Commands (GRANT, REVOKE, COMMIT, ROLLBACK, SAVEPOINT)	100 min
10	Implementation of Sequences for Auto-Generated Keys and Creation of Views for Simplified Data Access in SQL	100 min
	Total	27 hours 20 min

Anuradha



Signature of Teacher

Approved by HOD/Dean

Approved by IQAC Director/Dean Ac



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN (July-Dec 2025)

Name of Teacher: Dr. Kuldeep Tomar Designation: Professor Branch: B. Tech - CSE
Subject Name: E-Commerce and Entrepreneurship Semester: 7th Subject Code: CODE: OEC-CS-701(II)
Date of Start: 25/07/2025 Total Load: 37 Hrs Date of Completion: 15/11/2025

Module/Unit-1

INTRODUCTION TO E-COMMERCE

S.No	Name of Topic	Hours
1	Need, importance, Business models	1
2	Revenue models and business processes, economic forces & e-commerce, identifying e-commerce opportunities,	1
3	International nature of e-commerce, technology infrastructure-internet	1
4	WWW; Business strategies for ecommerce: Revenue models in transaction, revenue strategic issues	1
5	Customer behavior and relationship intensity, advertising on the web	1
6	E-mail marketing, technology enabled CRM	1

Module/Unit 2

BUSINESS TO BUSINESS STRATEGIES

S.No	Name of Topic	Hours
1	Overview strategic methods for Developing E-Commerce, Purchasing, logistics and supply activities,	1
2	Electronic data interchange (EDI), electronic data interchange on the internet	1
3	Supply chain management using internet technologies, electronic market place & portals (Home shopping, E-marketing, Tele marketing)	1
4	Auctions, online auctions, virtual communicative & web portals	2
5	Legal, and ethical issues in e-commerce — use and protection of intellectual property in online business.	1
6	Online crime, terrorism & warfare, ethical issues.	1

Module/Unit 3

ENTREPRENEURSHIP

S.No	Name of Topic	Hours
------	---------------	-------

1	Definition, Concept, Growth and role.	1
2	The Entrepreneur: types, Characteristics, theories of Entrepreneurial class,	1
3	Urges and importance of Entrepreneurship Stimulants	1
4	Seed-Beds of Entrepreneurship, Influencing Factors	1
5	Problems (Operational and Non-Operational) and Obstacles	1
6	Entrepreneurial Management. Role of socio-economic environment	1

Module/Unit 4
CYBER CRIMES & LEGAL FRAMEWORK

S.No	Name of Topic	Hours
1	Skills for a New Class of Entrepreneurs, The Ideal Entrepreneurs.	1
2	The Entrepreneurship Audit, Identification of opportunities by an entrepreneur	2
3	The steps to identify the project /ventures	1
4	Process of converting business opportunities into reality	2
5	Feasibility Report and analysis, Process of setting up a small-scale industry/unit	1
6	Revision and Group Presentation	1

Module/Unit 5

S.No	Name of Topic	Hours
1	Promotion of a venture, External Environment Analysis	1
2	Economic, Social, Technological, and competition	2
3	Legal Framework for establishing and fundraising Venture Capital	1
4	Sources and Documents required.	1
5	Revision and Presentation	2

TEXT/ REFERENCES BOOKS:

• Chris Reed & John Angel, Computer Law, OUP, New York, (2007). • Justice Yatindra Singh, Cyber Laws, Universal Law Publishing Co, New Delhi, (2012) • Verma S, K, Mittal Raman, Legal Dimensions of Cyber Space, Indian Law Institute, New Delhi, (2004) • Jonthan Rosenoer, Cyber Law, Springer, New York, (1997). • Sudhir Naib, The Information Technology Act, 2005: A Handbook, OUP, New York, (2011) • S. R. Bhansali, Information Technology Act, 2000, University Book House Pvt. Ltd., Jaipur (2003). • Vasu Deva, Cyber Crimes and Law Enforcement, Commonwealth Publishers, New Delhi, (2003).






Signature of Teacher

Approved by HOD/Dean

Approved by IQAC Director/Dean Ac



NGF COLLEGE OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN (july-dec 2025)

Name of Teacher: Ms.Reetu

Designation: Assistant Professor

Subject Name: Internet Of Things

Branch: Computer Science

Semester: B.tech 7th sem

Subject Code: (PEC-CS-S-703)

Date of Start: 21 July 2025

Total Load: 25 hr

Date of Completion: 21 Nov. 2025

Module/Unit-1: Introduction to IOT

S.No	Name of Topic	Hours
1	Introduction , characteristics of IOT	50
2	Physical design of IOT	50
3	Logical design of IOT	50
4	Functional blocks of IOT	50
5	communication models and API's	50
6	IOT & M2M	50
7	Software define network	50
8	Challenges in IOT	50

	Total	6 hr 40 min

Module/Unit 2- Network and communication Aspects

S.No	Name of Topic	Hours
1	Wireless medium access issues	50
2	MAC protocol survey	50
3	Survey routing Protocols	50
4	Sensor deployment Node discovery	50
5	Data aggregation	50
6	Data Dissemination	50
	Total	5 hr

Module/Unit 3- Web of Things

S.No	Name of Topic	Hours
1	WoT VS IoT	50
2	Two pillars of web	50
3	Architecture of IOT	50
4	Standardization of IOT	50

5	WoT Portals	50
6	Business Intelligence	50
7	Cloud of things	50
8	Grid/SOA	50
9	Cloud computing	50
10	Cloud middleware	50
11	Cloud standards	50
	Total	9hr.10 min

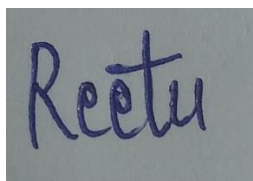
Module/Unit 4- Resource management in IOT

S.No	Name of Topic	Hours
1	Domain specific applications of IOT	50
2	Home Automation	50

3	Industry Applications	50
4	Surveillance applications	50
5	Other IoT Applications	50
	Total	4 hr.10 min

TEXT BOOKS:

1. Vijay Madiseti, ArshdeepBahga, "Internet of Things: A Hands-On Approach"
2. WaltenegusDargie,ChristianPoellabauer, "Fundamentals of Wireless Sensor Networks: Theory and Practice"



Signature of Teacher

Approved by HOD/Dean

Approved by IQAC Director/Dean



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN (July-Dec 2025)

Name of Teacher: Neha Khanna **Designation:** A.P **Subject Name:** Advanced Operating System
Branch: B.TECH **Semester:** 7th **Subject Code:** PEC-CS-S-701-I
Date of Start: 21-7-2025 **Total Load:** 41 hrs. **Date of Completion:** 14/11/2025

Module/Unit-1: Introduction to Operating System

S. No	Name of Topic	Hours
1	Introduction to operating system	50 Min
2	evolution of OS , types of OS	50 Min
3	batch OS, single user OS , multiuser OS	50 Min
4	multiprogramming and multitasking OS	50 Min
5	multithreading, time sharing, embedded OS	50 Min
6	distributed OS multiprocessor OS	50 Min
7	real time OS and mobile OS	50 Min
8	Revision	50 Min
	Total	6

Module/Unit 2- Distributed Operating System

S.No	Name of Topic	Hours
1	introduction and characteristics	50 Min
2	network OS and distributed OS	50 Min
3	issues in distributed OS and communication in distributed OS	50 Min
4	clock synchronization	50 Min
5	mutual exclusion algorithm	50 Min

6	mutual exclusion algorithm	50 Min
7	deadlock detection	50 Min
8	prevention	50 Min
9	process scheduling	50 Min
10	file system	50 Min
11	Revision	50 Min
	Total	9

sModule/Unit-3: Multiprocessor Operating System

S. No	Name of Topic	Hours
1	Introduction to multiprocessor OS	50 Min
2	system architecture	50 Min
3	structure of multiprocessor OS	50 Min
4	process synchronization	50 Min
5	process scheduling algorithm	50 Min
6	memory sharing	50 Min
7	process migration	50 Min
8	fault tolerance	50 Min
9	Revision	50 Min
	Total	7

Module/Unit-4: Real Time Operating System

S. No	Name of Topic	Hours
1	introduction to real time OS	50 Min
2	Characteristics	50 Min
3	Structure of RTOS	50 Min

4	scheduling algorithms	50 Min
5	scheduling algorithms	50 Min
6	mutual exclusion	50 Min
7	mutual exclusion	50 Min
8	priority inheritance protocol	50 Min
9	priority ceiling protocol	50 Min
10	case studies	50 Min
11	Revision	50 Min
	Total	9

Module/Unit-5: Mobile Operating System

S. No	Name of Topic	Hours
1	Introduction and mobile devices	50 Min
2	Characteristics of mobile devices,	50 Min
3	resource management	50 Min
4	power management	50 Min
5	battery management	50 Min
6	thermal management	50 Min
7	memory management	50 Min
8	scheduling	50 Min
9	file system,	50 Min
10	security,	50 Min
11	android OS	50 Min
12	Revision	50 Min
	Total	10

TEXT/REFERENCE BOOKS:

1. Mukesh Singhal, Niranjana G. Shivaratri, “*Advanced Concepts In Operating Systems*”, Tata McGraw-Hill Education; 2nd edition, [ISBN: 007057572X], 2001.
2. Andrew S. Tanenbaum , Herbert Bos ,”*Modern Operating Systems*”, Pearson Prentice Hall™; 4th edition, [ISBN: 9781292061429],2014.
3. D. M. Dhamdhare,” *Operating Systems*”, Tata McGraw Hill; 1st edition, [ISBN: 9781282187245],2006.



Signature of Teacher



Approved by HOD/Dean



Approved by IQAC Director/Dean Academics



NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN (July-Dec 2025)

Name of Teacher: Ms. Pinkee Designation: Assistant Professor Subject Name: ASN
Branch: B.Tech CSE Semester: 7th Subject Code: PEC-CS-S-702
Date of Start: 14/07/25 Total Load: 32 hrs Date of Completion: 21/11/25

Module/Unit-1: INTRODUCTION and MANET & WSN:

S.No	Name of Topic	Hours
1	Wireless Networks,	50 Min
2	Infrastructure and Infrastructure less Wireless Networks	50 Min
3	Ad hoc Wireless Networks,	50 Min
4	Heterogeneity in Mobile Devices	50 Min
5	Types of Adhoc Mobile Communications,	50 Min
6	Concepts & architecture of MANET & WSN	50 Min
7	Applications & Design Challenges of Adhoc& Sensor Networks.	50 Min
	Total	6 Hrs.

Module/Unit 2- Routing Protocols in MANET and QoS in Ad-hoc Networks:

S.No	Name of Topic	Hours
1	Destination Sequenced Distance Vector (DSDV),	50 Min
2	Wireless Routing Protocol (WRP),	50 Min
3	Cluster Switch Gateway Routing (CSGR)	50 Min
4	Ad hoc On-Demand Distance Vector Routing (AODV) ,	50 Min
5	Dynamic Source Routing (DSR)	50 Min
6	Temporally Ordered Routing Algorithm (TORA	50 Min
7	Signal Stability Routing (SSR)	50 Min

8	Location–Aided Routing (LAR)	
9	<i>Hybrid Routing Protocol: Zone Routing Protocol (ZRP).</i>	50 Min
10	Introduction to QoS, Issues and Challenges in Providing QoS in Ad hoc Wireless Networks,	50 Min
11	classifications of QoS Solutions	50 Min
12	Network Layer Solutions (Ticket Based QoS Routing, Predictive Location Based QoS Routing, QAODV)	50 Min
13	QoS Frameworks for Ad hoc Wireless Networks (IntServ,	50 Min
14	, DiffServ, FQMM	50 Min
15	INSIGNIA,	50 Min
16	INORA)	50 Min
	Total	13 Hrs

Module/Unit 3- Wireless Sensor Networks (WSN) and MAC Protocols :

S.No	Name of Topic	Hours
1	Protocol Stack of WSN, Origin ,need and Enabling Technologies for WSN	50 Min
2	WSN Middleware Principles	50 Min
3	Middleware Architecture	50 Min
4	Existing Middleware (Milan, IrisNET,CLMF,MLM),	50Min
5	Operating systems Design Issues Challenges for MAC,	50 Min
6	Classification of MAC Protocols ,	50 Min
7	Contention free and Contection Based MAC Protocols.	50 Min
	Total	6 Hrs

Module/Unit 4- WSN Routing, Localization &QoS and Security in WSN

S.No	Name of Topic	Hours
1	Challenges for Routing, Classification of Protocols,) and	50 Min
2	Data–Centric and Flat Architecture Protocols (Flooding,Gossiping,SPIN	50 Min
3	Heirarchical protocols (LEACH,PEGASIS,TEEN,APTEEN),	50 Min
4	Location Based(Unicast, Multicast, GeoCast)	50 Min
5	QoS based(Sequential Assignment,SPEED) Routing Protocols.	50 Min

6	Challenges of Security in WSN, Security Attacks in WSN,	50 Min
7	Protocols and Mechanisms for Security	50 Min
8	IEEE 802.15.4 and ZigBee Security	50 Min
	Total	7 Hrs

TEXT BOOKS/ REFERENCE BOOKS:

1. C. Siva Ram Murthy and B. S. Manoj, “Ad Hoc Wireless Networks Architectures and Protocols”, Prentice Hall, PTR, 2004.
2. C. K. Toh, “Ad Hoc Mobile Wireless Networks Protocols and Systems”, Prentice Hall, PTR, 2001.
3. Charles E. Perkins, “Ad Hoc Networking”, Addison Wesley, 2000
4. Anna Hac, “Wireless Sensor Network Designs”, John Wiley, 2003, ISBN : 0-470-86736-1
5. Holger Karl & Andreas Willig, " Protocols And Architectures for Wireless Sensor Networks" , John Wiley, 2005, ISBN : 0-470-09510-5.
6. Ian F. Akyildiz and Mehmet Can Varun ” Wireless Sensor Networks” John Wiley ISBN 978-0- 470-03601-3.
7. Kazem Sohraby, Daniel Minoli, & Taieb Znati, “Wireless Sensor Networks-Technology, Protocols, And Applications”, John Wiley, 2007, ISBN :978-0-471-74300-2



Pinkal

Signature of Teacher

Approved by HOD/Dean

Approved by IQAC Director/Dean Academics



NGF COLLEGE OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN (july-dec 2025)

Name of Teacher: Ms.Aarti Designation:Assistant Professor
SubjectName:economics policy of india Branch: Computer Science
Semester: B.tech 7thsem Subject Code:(OEC-CS-702(I)
Date of Start: 21 July 2025 Total Load:35hr.
Date of Completion: 21 Nov. 2025

Module/Unit-1: frame work of Indian economy

S.No	Name of Topic	Hours
1	Introduction of epi	50min
2	Introduction of national income	50min
3	Demographic features and indicators of economics	100min
4	Poverty debate and inequality' nature policy and implications	50min
5	Unemployment nature and central and state government policies	100min
6	Policy implications	50min
7	Employment trend in organizedsector	100min
8	Unemployment trend in unorganized	50min

	Total	9hour10min
--	--------------	------------

Module/Unit 2-Development strategies in India

S.No	Name of Topic	Hours
1	Meaning of agricultural pricing,marketing and financing of primary sector	50min
2	Economics reforms-rational of economic reform liberalisation,privatization,and globalisation of the economy	100min
3	Changing structure of India's foreign trade	50min
4	Role of public sector – redefining the role of public sector , government policy towards	100min
5	Public sector ,problem associated with privatization, issue regarding deregulation	100min
6	Disinvestment and future of economic reforms	100min
	Total	8hour 30 min

Module/Unit 3-The economy policy and infrastructure development

S.No	Name of Topic	Hours
1	Meaning of energy and transport	50min
2	Social infrastructure- education,health and gender realeted issue ,social inclusion	50min

3	Issue and policy in financial infrastructure development	50min
4	Indian financial system	50min
5	Issue of financial inclusion	50min
6	Financial sector reform	100min
7	Review of monetary policy	50min
8	Meaning of rbi	50min
9	Meaning of capital market in India	50min
10	Define types of capital market	50 min
11	Definition of rbi and other privates banks	50min
	Total	10 hour

Module/Unit-4 the economic policy and infrastructure development

S.No	Name of Topic	Hours
1	Industrial sector in pre reform period ,growth and pattern of industrialisation	50min
2	Industrial sector in post reform – growth and pattern of macro , small medium enterprises	100min

3	Problem of India' s indutrail exports	50min
4	Labour market , issue in labour market reforms	100min
5	Approaches to employment generation basic	50min
	Total	5hr.10 min

TEXT BOOKS:

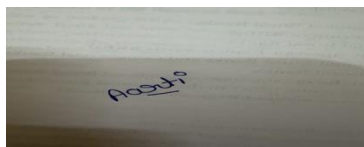
1. Datt & Sundaram – Indian Economy
2. Mishra & Puri – Indian Economy
3. Uma Kapila – Indian Economy

REFERENCE BOOKS:

1. **Datt, Ruddar & Sundaram, K.P.M.** – *Indian Economy*
2. **Jalan, Bimal** – *India's Economic Policy: Preparing for the Twenty First Century*
3. **Ahluwalia, I.J. & Little, I.M.D. (eds.)** – *India's Economic Reforms and Development*
4. **Panagariya, Arvind** – *India: The Emerging Giant*
5. **Government of India** – *Economic Survey (latest edition)*
6. **Reserve Bank of India (RBI)** – *Annual Report & Report on Currency and Finance.*







**Signature of Teacher
Academics**

Approved by HOD/Dean

Approved by IQAC Director/Dean



NGF COLLEGE OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN (Jan-July 2025)

Name of Teacher: Ms.Sonia

Designation: A.P

Subject Name: Finance & Accounting

Branch: B.TECH

Semester: 7th

Subject Code: HSMC- 04

Date of Start: 21-7-2025

Total Load: 18 hrs 20 mins

Date of Completion: 21/11/2025

Module/Unit-1

S. No	Name of Topic	Hours
1	Meaning nature and scope of different types of accounting	50 Min
2	their comparison. Accounting principles	50 Min
3	Indian accounting standards, IFRS	50 Min
4	Preparation of final accounts of company with basic adjustments	50 Min
5	understanding of Annual report	50 Min
	Total	4 hr 10 mins

Module/Unit 2

S.No	Name of Topic	Hours
------	---------------	-------

1	Analysis and interpretation of financial statements	50 Min
2	meaning, importance and techniques	50 Min
3	, ratio analysis	50 Min
4	fund flow analysis	50 Min
5	cash flow analysis (AS-3)	50 Min
	Total	4 hr 10 mins

Module/Unit-3

S. No	Name of Topic	Hours
1	Classification of costs, preparation of cost sheet	50 Min
2	inventory valuation	50 Min
3	overview of standard costing	50 Min
4	variance analysis; material variance and labour variance.	50 Min
	Total	3 hr 20 mins

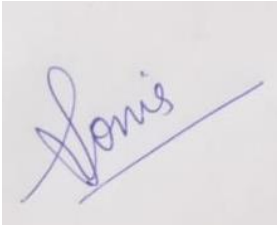
Module/Unit-4

S. No	Name of Topic	Hours
1	Budgetary control- meaning, need, objectives	50 Min
2	essentials of budgeting, different types of budgets	50 Min
3	cash budget,	50 Min
4	flexible budget zero base budget	50 Min

5	; marginal costing, BEP analysis	50 Min
6	, decision making for optimum sales mix	50 Min
7	, exploring new markets, make/Buy decisions	50 Min
8	expand/ contract, accepting and rejecting decisions	50 Min
	Total	6hr 40 mins

REFERENCES:

1. Singhal, A.K. and Ghosh Roy, H.J., Accounting for Managers, JBC Publishers and Distributors, New Delhi
2. Pandey, I.M., Management Accounting, Vikas Publishing House, New Delhi
3. Horngren, Sundem and Stratton, Introduction to Management Accounting, Pearson Education, New Delhi.
4. Jain, S.P and Narang, K.L., Advanced Cost Accounting, Kalyani Publishers, Ludhiana.
5. Khan, M.Y. and Jain, P.K., Management Accounting, TMH, New Delhi.



Signature of Teacher
Academics



Approved by HOD/Dean



Approved by IQAC Director/Dean





NGF COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

LESSON PLAN (July-Dec 2025)

Name of Teacher: Bhawna Aggarwal

Designation: A.P

Subject Name: Project -V

Branch: B.Tech CSE

Semester: 7th

Subject Code: PROJ-CS-701

Date of Start: 21/7/2025

Total Load: 21hrs.

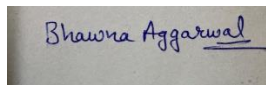
Date of Completion: 14/11/2025

S.No	Activities	Hours
1	Introduction to Project Lab: Overview of objectives, assessment pattern, project categories (software/hardware/research-based), and guidelines for project selection.	100 Min
2	Project Ideation & Problem Identification: Brainstorming and group formation. Guidance on selecting innovative and feasible project ideas	50 Min
3	Literature Review & Feasibility Study: Discuss how to conduct literature surveys using research databases. Assess technical, financial, and operational feasibility,	100 Min
4	Project Proposal Presentation (Stage-I): Each team presents their idea, objectives, and feasibility to the faculty for approval.	100 Min
5	System Design & Architecture: Conceptual and detailed design – DFDs, UML diagrams, block diagrams, or flowcharts	50 Min
6	Technology and Tools Finalization: Selection of appropriate software, libraries, frameworks, or hardware components. Installation and environment setup	100 Min
7.	Module Division and Work Allocation: Breakdown of project into modules; assigning tasks among team members; defining milestones.	100 Min
8.	Implementation Phase – I: Begin coding or hardware assembly of core modules. Faculty supervision and code review.	100 Min
9.	Implementation Phase – II: Continued development of project components. Debugging and integration.	100 Min
10.	Testing and Validation – I: Unit testing of developed modules; discussion on testing techniques and documentation. Testing and Validation – II: System integration testing, validation against requirements, and bug fixing.	100 Min

11	Project Review (Stage-II Presentation): Progress evaluation through demonstration and presentation before internal review committee.	100 Min
12	Report Writing and Documentation: Guidance on technical report preparation — abstract, methodology, results, conclusion, references, and formatting standards	100 Min
13	Final Presentation and Demonstration (Stage-III): Each team demonstrates the final project outcome with presentation slides and live demo.	100 Min
14	Viva-Voce and Submission: Oral examination, code verification, final report submission (soft + hard copy).	50 Min
TOTAL		21 Hours

References:

- Pressman, R. S. Software Engineering: A Practitioner's Approach.
- Ian Sommerville, Software Engineering.
- Project development manuals provided by the department.
- IEEE standards for documentation and testing.



Signature of Teacher



Approved by HOD/Dean




Approved by IQAC Director/Dean Academics