

**AMBALA COLLEGE OF ENGINEERING AND APPLIED RESEARCH
DEPTT. OF ECE**

Lecture Plan : (ECO-13A)
Name of the Faculty : Er. Monika Sharma
Discipline : ECE
Semester : 8th
Subject : Soft Computing
Lesson Plan Duration: 15 weeks (JAN-MAY 2026)

**** Work (03 Lecture) per week (In Hours):Lecture -03 (Of One Section)**

Week	Lecture Day	Topic (including assignment/test) (In Each Section)	Practical Day
1	1	Unit-1 Introduction of Soft Computing	NA
	2	Soft Computing vs. Hard Computing	
	3	Various Types of Soft Computing Techniques	
2	1	Various Types of Soft Computing Techniques	NA
	2	Applications of Soft Computing, AI Search Algorithm	
	3	Predicate Calculus, Rules of Inference	
3	1	Semantic Networks, Frames	NA
	2	Revision	
	3	Class Test	
4	1	Objects, Hybrid Models	NA
	2	Unit-2 Introduction to Neuron Model	
	3	Neural Network Architecture	
5	1	Learning Rules, Perceptrons	NA
	2	Single Layer Perceptrons	
	3	Multilayer Perceptrons	
6	1	Class Test	NA
	2	Sessional-1	
	3	Sessional-1	
7	1	Back propagation Networks	NA
	2	Kohonen's self-organizing networks	
	3	Hopfield network	
8	1	Applications of NN	NA
	2	Unit-3 Introduction to Fuzzy Logic	
	3	Fuzzy sets and Fuzzy reasoning	
9	1	Basic functions on fuzzy sets	NA
	2	Relations	
	3	Rule-based models and linguistic variables	
10	1	Fuzzy controls	NA
	2	Class test	
	3	Sessional-2	
11	1	Sessional-2	NA
	2	Sessional-2	

	3	Fuzzy decision making, applications of fuzzy logic.	
12	1	Introduction, Genetic Algorithm, Fitness Computations	
	2	Cross Over, Mutation, Evolutionary Programming	
	3	Classifier Systems	
13	1	Genetic Programming Parse Trees	
	2	Variants of GA	
	3	Applications	
14	1	Ant Colony Optimization, Particle Swarm Optimization,	
	2	Artificial Bee Colony Optimization.	
	3	Class Test	
15	1	Sessional 3	NA
	2	Sessional 3	
	3	Revision of all syllabus	