

18CSOE08		NEURAL NETWORKS	L	T	P	C		
			3	0	0	3		
Course Objectives:								
1.	To gain exposure in the field of neural networks and relate the human neural system into the digital world							
2.	To provide knowledge of computation and dynamical systems using neural networks							
UNIT I	INTRODUCTION					9	+	0
Architecture- Single-Neuron Perceptron- Multi-Neuron Perceptron- Perceptron								
UNIT II	PERCEPTRON					9	+	0
Perceptron Learning Rule- Constructing Learning Rules- Training Multiple-Neuron Perceptrons.								
UNIT III	ASSOCIATIVE NETWORKS					9	+	0
Simple Associative Networks- Unsupervised Hebb Rule- Hebb Rule with Decay-Instar Rule-Outstar Rule- Kohonen Rule.								
UNIT IV	ADALINE NETWORK & BACK PROPAGATION					9	+	0
Adaline Network- Madaline Network -Mean Square Error- LMS Algorithm- Back Propagation Neural networks – Hopfield Networks								
UNIT V	ADAPTIVE FILTERING					9	+	0
Adaptive Filtering- Adaptive Noise Cancellation- Forecasting – Neural control applications – Character recognition.								
Total (L+T)= 45 Periods								
Course Outcomes:								
Upon completion of this course, the students will be able to:								
CO1	:	Acquire skill set to innovate and build a smart and intelligent engineering application using ANN						

Text Books:	
1.	Hagan Demuth Beale, 'Neural network design', PWS publishing company, 1995
2.	Freeman, J.A and Skapura, D.M., 'Neural networks-Algorithms, applications and programming techniques' Addison Wesley, 1991
3.	Satish Kumar, Neural Networks – A classroom approach', Tata McGraw-Hill Publishing Company Limited, 2004
Reference Books:	
1.	Patterson and Hennessey, "Computer Organization and Design ". The Hardware/Software interface, Harcourt Asia Morgan Kaufmann, 3rd Edition, 2007
2.	Hayes, "Computer Architecture and Organization ", 3 rd edition, Tata McGraw Hill, 2006
3.	Heuring V.P., Jordan H.F., " Computer System Design and Architecture ", 6 th edition ,Addison Wesley, 2008