**MA\*733 Neural Network**

INTRODUCTION - what is a neural network? Human Brain, Models of a Neuron, Neural networks viewed as Directed Graphs, Network Architectures, Knowledge Representation, Artificial Intelligence and Neural Networks.

LEARNING PROCESS 1 – Error Correction learning, Memory based learning, Hebbian learing,

LEARNING PROCESS 2: Competitive, Boltzmann learning, Credit Assignment Problem, Memory, Adaption, Statistical nature of the learning process,

SINGLE LAYER PERCEPTRONS – Adaptive filtering problem, Unconstrained Organization Techniques,

MULTILAYER PERCEPTRON – Back propagation algorithm XOR problem, Heuristics, Output representation and decision rule, Computer experiment, feature detection.

**References:**

1. Neural networks A comprehensive foundations, Simon Hhaykin, Pearson Education 2nd Edition 2004
2. Artificial neural networks - B.Vegnanarayana Prentice Halll of India P Ltd 2005
3. Neural networks in Computer intelligence, Li Min Fu TMH 2003
4. Neural networks James A Freeman David M S kapura Pearson Education 2004