



**ITM(SLS) BARODA UNIVERSITY**  
**SCHOOL OF COMPUTER SCIENCE, ENGINEERING AND TECHNOLOGY (SOCSET)**  
**EVEN SEMESTER 2023-24**

**<CET-1 > SYLLABUS**

**PROGRAM: <B. TECH >**

**BRANCH: CSE/IT/AI SEMESTER: VII**

**SUB-CODE:**

**SUB-NAME: Deep Learning**

Unit # (As per University Syllabus)	Unit Name	Topics
1	<b>Machine Learning Basics</b>	Learning algorithms, Maximum likelihood estimation, Building machine learning algorithm, Neural Networks Multilayer Perceptron, Back-propagation algorithm and its variants Stochastic gradient descent, Curse of Dimensionality
2	<b>Introduction to Deep Learning &amp; Architectures</b>	Machine Learning Vs. Deep Learning, Representation Learning, Width Vs. Depth of Neural Networks, Activation Functions: RELU, LRELU, ERELU, Unsupervised Training of Neural Networks, Restricted Boltzmann Machines, Auto Encoders.
3	<b>Convolutional Neural Networks</b>	Architectural Overview – Motivation – Layers (up to fully connected layer)