

**SWARNANDHRA
COLLEGE OF ENGINEERING AND TECHNOLOGY
(AUTONOMOUS)**

**SEETHARAMPURAM, NARSAPUR-534280, WG- DT, AP
DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS**

TEACHING PLAN

Course Code	Course Title	Year / Sem.	Branch	Contact Hr/ week	Academic Year
24MC3L01	Machine Learning With Python Lab	II/I	MCA	3	2025-26

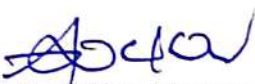
Course Outcomes (COs): At the end of the course, student will be able to

Course Outcomes		Knowledge Level (K)#
CO1	Implement procedures for the machine learning algorithms	K4
CO2	Design Python programs for various Learning algorithms	K6
CO3	Apply appropriate data sets to the Machine Learning algorithms	K3
CO4	Identify and apply Machine Learning algorithms to solve real world problems	K2

S.No	Program	Proposed Number of Labs
1	Implement and demonstrate the FIND-S algorithm for finding the most specific hypothesis based on a given set of training data samples. Read the training data from a .csv file	1
2	For a given set of training data examples stored in a .csv file, implement and demonstrate the Candidate-Elimination algorithm to output a description of the set of all hypotheses consistent with the training examples	1
3	Write a program to demonstrate the working of the decision tree based ID3 algorithm. Use an appropriate data set for building the decision tree and apply this knowledge to classify a new sample.	1
4	Write a Python program to implement k-Nearest Neighbour algorithm to classify the iris data set. Print both correct and wrong predictions.	1
5	Build an Artificial Neural Network by implementing the Back propagation algorithm and test the same using appropriate data sets.	1
6	Write a program to implement the naive Bayesian classifier for a sample training data set stored as a .csv file. Compute the accuracy of the	1

	classifier, considering few test datasets	
7	Write a Python program to construct a Bayesian network considering medical data. Use this model to demonstrate the diagnosis of heart patients using standard Heart Disease Data Set.	1
8	Assuming a set of documents that need to be classified, use the naive Bayesian Classifier model to perform this task. Built-in Java classes/API can be used to write the program. Calculate the accuracy, precision and recall for your data set	1
9	Apply EM algorithm to cluster a set of data stored in a .CSV file. Use the same data set for clustering using k-Means algorithm. Compare the results of these two algorithms and comment on the quality of clustering using Python Programming.	1
10	Implement the non-parametric Locally Weighted Regression algorithm in order to fit data points. Select appropriate data set for your experiment and draw graphs.	1


Faculty


Head of the Department


Principal