

TCET/FRM/IP-02/09					Revision: A		
Bridge Course Plan							
Semester: VII				Course: IT			
Subject: AI & Machine Learning				2 Lectures / Week		Class: BE IT A& B	
Sr. No.	Module No.	Lesson No.	Topics Planned (Technology to be used)	Teaching Aids Required	Planned /Completion Date	Resource Book Reference	Remarks
1.	Module 1	L 1.1	Definition of learning systems,what is Machine Learning? Supervised and Unsupervised Learning,Goalsof machine learning.	Power point presentation , Chalk & Board	16/07/2018 17/7/2018	1,2	
2.		L 1.2	The concept learning task, Concept learning as search through a hypothesis space, The importance of inductive bias.	Power point presentation , Chalk & Board	23/07/2018 19/7/2018	1,2	
3.		L 2.1	Introduction to: Regression, Classification, Clustering, Markov Decision Processes, Optimization.	Power point presentation , Chalk & Board	23/07/2018 24/7/2018	1,2	
4.	Module 2	L 2.2	Game Theory	Power point presentation , Chalk & Board	30/07/2018 26/7/2018	1,2	
5.		L 3.1	Reinforcement Learning, Bayesian Learning,	Power point presentation , Chalk & Board	30/07/2018 31/7/2018	1,2	
6.		L 3.2	Instance-Based Learning	Power point presentation , Chalk & Board	6/08/2018 2/8/2018	1,2	

7.	Module 3	L 4.1	Computational Learning Theory, Dimensionality Reduction, Ensemble Learning.	Power point presentation , Chalk & Board	6/08/2018 7/8/2018	1,2	
8.		L 4.2	Perceptron: representational limitation and gradient descent training,	Power point presentation , Chalk & Board	13/08/2018 9/8/2018	1,2	
9.		L 5.1	Multilayer networks and backpropagation.	Power point presentation , Chalk & Board	13/08/2018 14/8/2018	1,2	
10.	Module 4	L 5.2	Classical Sets and Fuzzy Sets, Classical Relations and Fuzzy Relations, Properties of membership function	Power point presentation , Chalk & Board	27/08/2018 16/8/2018	1,2	
11.		L 6.1	Fuzzy extension principle, Fuzzy Systems-fuzzification.	Power point presentation , Chalk & Board	27/08/2018 28/8/2018	1,2	
12.		L 6.2	defuzzification and fuzzy controllers.	Power point presentation , Chalk & Board	3/09/2018 30/8/2018	1,2	
13.		L 7.1	Case study on Fuzzy Logic	Power point presentation , Chalk & Board	3/09/2018 4/9/2019	1,2	
14.	Module 5	L 7.2	a simple genetic algorithm. Search Operators: Crossover	Power point presentation , Chalk & Board	6/9/2018	1,2	
15.		L 8.1	mutation, crossover and mutation rates.	Power point presentation , Chalk & Board	10/09/2018 11/9/2018	1,2	
16.		L 8.2	Case Study on Genetic Algorithm	Power point presentation , Chalk &	17/09/2018	1,2	



TCET
DEPARTMENT OF INFORMATION TECHNOLOGY (IT)
 Credit Based Grading System [CBGS - 2012(R)]/Choice Based Credit and Grading Scheme [CBCGS - 2016(R)]
University of Mumbai



				Board	18/9/2018		
17.	Module 6	L 9.2	Applications of Machine Learning in engineering problems	Power point presentation , Chalk & Board	24/09/2018 25/9/2018	1,2	
18.		L 10.1	job-shop scheduling problems	Power point presentation , Chalk & Board	1/10/2018 4/10/2018	1,2	
19.		L 10.2	Climatology	Power point presentation , Chalk & Board	08/10/2018 9/10/2018	1,2	
20.		L10.3	routing problems, Feature selection	Power point presentation , Chalk & Board	15/10/2018 16/10/2018	1,2	

Digital Reference:

1. https://www.tutorialspoint.com/mahout/mahout_machine_learning.htm

2. Machine Learning with Python

Mrs. NehaPatwari

Mrs. ShrutiMathur

Dr. Rajesh Bansode

Name & Signature of Faculty
Date:

Signature of HOD
Date:

Signature of Principal /Dean (Academics)
Date:

Note:

1. Plan date and completion date should be in compliance
2. Courses are required to be taught with emphasis on resource book, course file, text books, reference books, digital references etc.
3. Planning is to be done for 15 weeks where 1st week will be AOP, 2nd -13th for effective teaching and 14th -15th week for effective university examination oriented teaching, mock practice session and semester consolidation.
4. According to university syllabus where lecture of 4 hrs/per week is mentioned minimum 55 hrs and in case of 3 lectures per week minimum 45 lectures are to be engaged are required to be engaged during the semester and therefore accordingly semester planning for delivery of theory lectures shall be planned.
5. In order to improve score in NBA, faculty members are also required to focus course teaching beyond university prescribed syllabus and measuring the outcomes w.r.t learning course and programme objectives.
6. Text books and reference books are available in syllabus. Here only additional references w.r.t. non –digital/ digital sources can be written (if applicable)
7. Technology to be used in class room during lecture shall be written below the topic planned within the bracket.