



Laxmi Singh Charitable Trust's (Regd.)

THAKUR COLLEGE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, Govt. of Maharashtra & Affiliated to University of Mumbai*)

(Accredited Programmes by National Board of Accreditation, New Delhi**)

*Permanent Affiliated UG Programmes : • Computer Engineering • Electronics & Telecommunication Engineering • Information Technology (w.e.f. A.Y.2015-16 onwards)

**1st time Accredited UG Programmes : • Computer Engineering • Electronics & Telecommunication Engineering • Information Technology

**2nd time Accredited UG Programmes : • Computer Engineering • Electronics & Telecommunication Engineering • Information Technology • Electronics Engineering (3 years w.e.f. 01-07-2016)

A - Block, Thakur Educational Campus,
Shyamnarayan Thakur Marg, Thakur Village,
Kandivali (East), Mumbai - 400 101.

Tel.: 6730 8000 / 8106 / 8107

Fax : 2846 1890

Email : tcet@thakureducation.org

Website : www.tcetmumbai.in • www.thakureducation.org



ISO 9001 : 2008 Certified

TCET/FRM/IP-02/09

Revision: A

Semester Plan (Theory)

Semester: I

Course: IT

Subject: Data Science

Class: ME IT

Sr. No	Module No.	Lesson No	Topics Planned (Technology to be used)	Teaching Aids Required	Planned /Completion Date	Resource Book Reference	Remarks
1	Module 4	L4.1	Data Visualization basics, techniques	Power point presentation, Chalk & Board	10/8/2017	Data Science and Big Data analytics EMC	
2	Module 4	L4.2	Data Visualization types, applications	Chalk & Board, Animation	10/8/2017	Data Science and Big Data analytics, EMC	
3	Module 4	L4.3	Data Visualization tools	Chalk & Board, Animation	24/8/2017	Data Science and Big Data analytics, EMC	
4	Module 4	L4.4	Data Journalism	Chalk & Board, Animation	24/8/2017	Data Science and Big Data analytics, EMC	
5	Module 4	L4.5	Interactive dashboards	Chalk & Board, Animation	31/8/2017	Data Science and Big Data analytics, EMC	
6	Module 5	L5.1	Text Analysis- Text analysis steps,	Chalk & Board, Animation	31/8/2017	Data Science and Big Data analytics, EMC	
7	Module 5	L5.2	A text analysis example	Chalk & Board, Animation	31/8/17	Data Science and Big Data analytics, EMC	
8	Module 5	L5.3	Collecting raw text and representing text,	Chalk & Board, Animation	7/9/2017	Data Science and Big Data analytics, EMC	
9	Module 5	L5.4	TF and TFIDF	Power point presentation, Chalk & Board	7/9/2017	Doing Data Science, Rachel Scutt	
10	Module 5	L5.5	Categorizing documents by topics,	Chalk & Board, Animation	14/9/2017	Doing Data Science, Rachel Scutt, Dreamtech	
11	Module 5	L5.6	determining sentiments	Chalk & Board, Animation	14/9/2017	Doing Data Science, Rachel Scutt, Dreamtech	

12	Module 5	L5.7	Time series analytics-overview	Chalk & Board, Animation	21/9/2017	Doing Data Science, Rachel Scutt,Dreamtech	
13	Module 5	L5.8	ARIMA model	Chalk & Board, Animation	21/9/2017	Doing Data Science, Rachel Scutt,Dreamtech	
14	Module 6	L6.1	Data Science and Business Strategy: Thinking Data-Analytically	Power point presentation, Chalk & Board	28/9/2017	Data Science and Big Data analytics, EMC	
15	Module 6	L6.2	Data Science and Business Strategy: Thinking Data-Analytically	Chalk & Board, Animation	28/9/2017	Data Science and Big Data analytics, EMC	
16	Module 6	L6.3	Redux	Chalk & Board, Animation	5/10/2017	Data Science and Big Data analytics, EMC	
17	Module 6	L6.4	Competitive Advantage with Data Science,	Chalk & Board, Animation	5/10/2017	Data Science and Big Data analytics, EMC	
18	Module 6	L6.5	Data Science Case Studies	Chalk & Board, Animation	12/10/2017	Data Science and Big Data analytics, EMC	
19	Module 6	L6.6	Case Study: Global Innovation Network and Analysis	Power point presentation, Chalk & Board	12/10/2017	Data Science and Big Data analytics, EMC	
20	Module 6	L6.7	Case Study: Global Innovation Network and Analysis	Chalk & Board, Animation	26/10/2017	Data Science and Big Data analytics, EMC	
21			Revision	Chalk & Board, Animation	26/10/2017	Data Science and Big Data analytics, EMC	
Remark:		Syllabus Coverage:		Practice Session:			
Course:							
No. of (lectures planned)/(lecture taken): 21							

Text Books:

1. Data Science and Big Data analytics, EMC
2. Doing Data Science, Rachel Scutt,Dreamtech
3. Introducing data science
4. Introduction to Data science, Orielly

Reference Books:

- 1, Regression analysis by example, Morgan Kaufman
2. Data Mining Concept and Techniques, Springer

Digital Reference:

- 3.1 www.nptel.ac.in
- 3.2 www.tutorialpoint.com

Sd-
Name & Signature of Faculty

Sd-
Signature of HOD

Sd-
Signature of Principal /Dean (Academics)

Date:

Date:

Date:



Yashwantrao Chavan Trust's (Apt.)

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1	Module 1	L1.1	Introduction to Big data,Hadoop,Core component of Hadoop,Hadoop Ecosystem	Power point presentation, Chalk & Board	11/8/2017		
2	Module 1	L1.2	Definition, uses and benefits of Data science,	Chalk & Board, Animation	11/8/2017		
3	Module 1	L2.1	Data science vs Big data,Role of Data scientist	Chalk & Board, Animation	18/8/2017		
4	Module 1	L2.2	Role of data scientist, population, samples,statistical modelling,BI VS Data science	Chalk & Board, Animation	18/8/17		
5	Module 2	L4.1	Probability distribution,Fitting a Model,Statistical model for evaluation	Chalk & Board, Animation	1/9/2017		
6	Module 2	L4.2	Exploratory data analysis,Getting started with R,Manipulating and	Chalk & Board, Animation	1/9/2017		
7	Module 2	L5.1	Working with Function R programming	Chalk & Board, Animation	8/9/2017		
8	Module 2	L5.2	Working with descriptive statistics	Chalk & Board, Animation	8/9/2017		
9	Module 2	L6.1	working with graph plotting in R	Power point presentation, Chalk & Board	15/09/17		
10	Module 2	L6.2	K-nearest neighbours, simple and multiple linear regression	Chalk & Board, Animation	15/09/17		

11	Module 3	L7.1	Logical regression	Chalk & Board, Animation	22/9/17		
12	Module 3	L7.2	support vector machine	Chalk & Board, Animation	22/9/17		
13	Module 3	L-6.1	support vector machine	Chalk & Board, Animation	29/9/17		
14	Module 3	L-6.2	model based clustering	Power point presentation, Chalk & Board	29/9/17		
15	Module 3	L-7.1	model based clustering	Chalk & Board, Animation	6/9/2017		
16	Module 3	L-7.2	clustering with multi-dimensional data	Chalk & Board, Animation	6/9/2017		
17	Module 3	L-8.1	statistical model and clustering	Chalk & Board, Animation	13/9/17		
18	Module 3	L-8.2	Data analysis & manipulation with Clustering	Chalk & Board, Animation	13/9/17		
19	Module 3	L-9.1	Data analysis & manipulation with Clustering	Power point presentation, Chalk & Board	27/9/17		
20	Module 3	L-9.2	KDD process,High-Dimensional Data,	Chalk & Board, Animation	27/9/17		
21	Module 3		High-Dimensional Data,	Chalk & Board, Animation	3/11/2017		
Remark:		Syllabus Coverage:		Practice Session:			
Course:							
No. of (lectures planned)/(lecture taken): 20							

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