Bhoj Reddy Engineering College for Women: Hyderabad
Department of Information Technology
Lesson plan of faculty member for the academic year 2016–17

Class: IV B Tech   Branch-Section: IT-B   Semester: I
Subject: Big Data Analytics (Associate Analytics - II)   Lectures per week: 4+1 (Tutorial)

Lecture Number	Topics to be covered	Date (s)
UNIT – I: Data Management	
1	Design Data Architecture	13June 2016
2	Manage the data for analysis	14 June 2016
3	Understand various sources of Data like Sensors/Signals/GPS etc.	15 June 2016
4	Understand various sources of Data like Sensors/Signals/GPS etc	18 June 2016
5	Tutorial (G3, G1, G2) - Understanding Data Architecture	13, 14, 18 June 2016
6	Data Management	20 June 2016
7	Data Quality(noise, outliers)	21 June 2016
8	Data Quality(missing values, duplicate data)	22 June 2016
9	Data Preprocessing	25 June 2016
10	Tutorial (G3, G1, G2) - Data quality	20, 21, 25 June 2016
11	Export all the data onto cloud ex. AWS/Rackspace	27 June 2016
12	Maintain Healthy, Safe & Secure Working Environment	28 June 2016
13	Report Accidents & Emergencies	29 June 2016
14	Workplace safety	2 July 2016
15	Tutorial (G3, G1, G2) - Safety at workplace	27, 28 June, 2 July 2016
16	Protect Health and Safety at your work	4 July 2016
UNIT – II: Big Data Tools	
17	Introduction to Big Data Tools	5 July 2016
18	Hadoop	9 July 2016
19	Tutorial (G3, G1, G2) - Hadoop	4, 5, 9 July 2016
20	Hadoop	11 July 2016
21	Spark	12 July 2016
22	Spark	13 July 2016
23	Impala	16 July 2016
24	Tutorial (G3, G1, G2) - Spark	11, 12, 16 July 2016
25	Data ETL Process	18 July 2016
26	Identify gaps in the data	19 July 2016
27	Follow-up for decision making	20 July 2016
28	Provide data in standard formats	23 July 2016
29	Tutorial (G3, G1, G2) - ETL Process	18, 19, 23 July 2016
30	Knowledge Management	25 July 2016
31	Standardized reporting & compliances	26 July 2016
32	Decision Models	27 July 2016
UNIT – III: Big Data Analytics	
33	Run descriptives to understand the nature of available data	30 July 2016
34	Tutorial (G3, G1, G2) - Standardized reports	25, 26, 30 July 2016
35	Run descriptives to understand the nature of available data	2 August 2016
36	Collate all the data sources to suffice business requirement	3 August 2016
37	Collate all the data sources to suffice business requirement	6 August 2016
38	Tutorial (G1, G2) - Collating the data sources	2, 6 August 2016
39	Outlier Detection	16 August 2016
40	Outlier Detection	17 August 2016
41	Outlier Elimination	20 August 2016
42	Tutorial (G1, G2) - Outliers	16, 20 August 2016
43	Outlier Elimination	22 August 2016

	UNIT-IV: Machine Learning Algorithms	
44	Hypothesis testing	23 August 2016
45	Hypothesis testing	24 August 2016
46	Determining multiple analytical methodologies	27 August 2016
47	Tutorial (G3, G1, G2) - Hypothesis testing	22, 23, 27 August 2016
48	Determining multiple analytical methodologies	29 August 2016
49	Determining multiple analytical methodologies	30 August 2016
50	Train Model on 2/3 sample data using various statistical algorithms	31 August 2016
51	Train Model on 2/3 sample data using various statistical algorithms	3 September 2016
52	Tutorial (G3, G1, G2) - Statistical algorithms	29, 30 August, 3 September 2016
53	Train Model on 2/3 sample data using various statistical algorithms	6 September 2016
54	Train Model on 2/3 sample data using various ML algorithms	7 September 2016
55	Train Model on 2/3 sample data using various ML algorithms	10 September 2016
56	Tutorial (G1, G2) - Machine Learning algorithms	6, 10 September 2016
57	Test model on 1/3 sample for prediction	13 September 2016
58	Test model on 1/3 sample for prediction	14 September 2016
	UNIT-V: Data Visualization	
59	Prepare the data for Visualization	17 September 2016
60	Tutorial (G1, G2) – Testing models for prediction	13,17 September 2016
61	Prepare the data for Visualization	19 September 2016
62	Tableau	20 September 2016
63	Tableau	21 September 2016
64	Tableau	24 September 2016
65	Tutorial (G3, G1, G2) - Tableau	19, 20, 24 September 2016
66	QuickView and D3	26 September 2016
67	QuickView and D3	27 September 2016
68	Draw insights out of Visualization tool	28 September 2016
69	Draw insights out of Visualization tool	1 October 2016
70	Tutorial (G3, G1, G2) - QuickView	26, 27 September, 1 October 2016
71	Product Implementation	3 October 2016
72	Product Implementation	4 October 2016
73	Revision	29 October 2016
74	Tutorial (G3, G1, G2) - Revision	3, 4, 29 October 2016
75	Revision	31 October 2016
76	Discussion on possible questions for JNTU Exam	1 November 2016
77	Discussion on possible questions for JNTU Exam	2 November 2016
78	Tutorial (G3, G1) – Revision	31 October, 1 November 2016

Text books:
1.   Student's Handbook for Associate Analytics (Module II)

Name and signature of the faculty: Mr Srinivasa Rao G   ----

Name and signature of Head of the Department: Mr Srinivasa Rao G ----