**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 | |

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| 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

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Name & Signature of Faculty Signature of HOD Signature of Principal /Dean (Academics)

**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.