

### Lesson Plan & Work-done Diary for AY: 2024-25, EVEN Semester

| Course with Code: Big Data Analytics [BAD601] |                      |                                                                              |                     |          | Faculty: Ms. Ambika V      |                | Semester & Section: VI |                          |
|-----------------------------------------------|----------------------|------------------------------------------------------------------------------|---------------------|----------|----------------------------|----------------|------------------------|--------------------------|
| Class No.                                     | Date planned (DD/MM) | Topics to be covered                                                         | TLP Planned         | ClassNo. | Date of Conduction (DD/MM) | Topics Covered | TLP Executed           | Remarks if any deviation |
| <b>MODULE-1</b>                               |                      |                                                                              |                     |          |                            |                |                        |                          |
| 1.                                            |                      | Introduction to the course                                                   | PPT<br>Chalk & Talk | 1        |                            |                |                        |                          |
| 2.                                            |                      | Classification of data, Characteristics                                      | PPT<br>Chalk & Talk | 2        |                            |                |                        |                          |
| 3.                                            |                      | Evolution and definition of Big data                                         | PPT<br>Chalk & Talk | 3        |                            |                |                        |                          |
| 4.                                            |                      | What is Big data, Why Big data                                               | PPT<br>Chalk & Talk | 4        |                            |                |                        |                          |
| 5.                                            |                      | Traditional Business Intelligence Vs Big Data                                | PPT<br>Chalk & Talk | 5        |                            |                |                        |                          |
| 6.                                            |                      | Typical data warehouse and Hadoop environment                                | PPT<br>Chalk & Talk | 6        |                            |                |                        |                          |
| 7.                                            |                      | Big Data Analytics: What is Big data Analytics, Classification of Analytics  | PPT<br>Chalk & Talk | 7        |                            |                |                        |                          |
| 8.                                            |                      | Importance of Big Data Analytics, Technologies used in Big data Environments | PPT<br>Chalk & Talk | 8        |                            |                |                        |                          |
| 9.                                            |                      | Few Top Analytical Tools, NoSQL, Hadoop.                                     | PPT<br>Chalk & Talk | 9        |                            |                |                        |                          |
| 10.                                           |                      | Revision, Quiz                                                               | PPT, Socrative app  | 10       |                            |                |                        |                          |

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| <b>MODULE-2</b>                               |                      |                                                                                         |                     |                       |                            |                |                        |                          |
| 1.                                            |                      | Introducing hadoop, Why hadoop                                                          | PPT<br>Chalk & Talk | 1                     |                            |                |                        |                          |
| 2.                                            |                      | Why not RDBMS, RDBMS Vs Hadoop                                                          | PPT<br>Chalk & Talk | 2                     |                            |                |                        |                          |
| 3.                                            |                      | History of Hadoop, Hadoop overview                                                      | PPT<br>Chalk & Talk | 2                     |                            |                |                        |                          |
| 4.                                            |                      | Use case of Hadoop, HDFS (Hadoop Distributed File System),                              | PPT<br>Chalk & Talk | 4                     |                            |                |                        |                          |
| 5.                                            |                      | Processing data with Hadoop                                                             | PPT<br>Chalk & Talk | 5                     |                            |                |                        |                          |
| 6.                                            |                      | Managing resources and applications with Hadoop YARN (Yet Another Resource Negotiator). | PPT<br>Chalk & Talk | 6                     |                            |                |                        |                          |
| 7.                                            |                      | Introduction, Mapper                                                                    | PPT<br>Chalk & Talk | 7                     |                            |                |                        |                          |
| 8.                                            |                      | Reducer, Combiner                                                                       | PPT<br>Chalk & Talk | 8                     |                            |                |                        |                          |
| 9.                                            |                      | Partitioner, Searching                                                                  | PPT<br>Chalk & Talk | 9                     |                            |                |                        |                          |
| 10.                                           |                      | Sorting, Compression.                                                                   | PPT<br>Chalk & Talk | 10                    |                            |                |                        |                          |

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| <b>MODULE-3</b>                               |                      |                                 |                     |                       |                            |                |                        |                          |
| 1.                                            |                      | What is MongoDB                 | PPT<br>Chalk & Talk | 1                     |                            |                |                        |                          |
| 2.                                            |                      | Why MongoDB                     | PPT<br>Chalk & Talk | 2                     |                            |                |                        |                          |
| 3.                                            |                      | Terms used in RDBMS and MongoDB | PPT<br>Chalk & Talk | 3                     |                            |                |                        |                          |
| 4.                                            |                      | Terms used in RDBMS and MongoDB | PPT<br>Chalk & Talk | 4                     |                            |                |                        |                          |
| 5.                                            |                      | Data Types in MongoDB           | PPT<br>Chalk & Talk | 5                     |                            |                |                        |                          |
| 6.                                            |                      | Data Types in MongoDB           | PPT<br>Chalk & Talk | 6                     |                            |                |                        |                          |
| 7.                                            |                      | MongoDB Query Language          | PPT<br>Chalk & Talk | 7                     |                            |                |                        |                          |
| 8.                                            |                      | MongoDB Query Language          | PPT<br>Chalk & Talk | 8                     |                            |                |                        |                          |
| 9.                                            |                      | Revision                        | PPT                 | 9                     |                            |                |                        |                          |
| 10.                                           |                      | Quiz                            | Socrative app       | 10                    |                            |                |                        |                          |

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| <b>MODULE-4</b>                               |                      |                                                                         |                     |                       |                            |                |                        |                          |
| 1.                                            |                      | What is Hive, Hive Architecture                                         | PPT<br>Chalk & Talk | 1                     |                            |                |                        |                          |
| 2.                                            |                      | Hive data types, Hive file formats                                      | PPT<br>Chalk & Talk | 2                     |                            |                |                        |                          |
| 3.                                            |                      | Hive Query Language (HQL), RC File implementation                       | PPT<br>Chalk & Talk | 3                     |                            |                |                        |                          |
| 4.                                            |                      | User Defined Function (UDF)                                             | PPT<br>Chalk & Talk | 4                     |                            |                |                        |                          |
| 5.                                            |                      | What is Pig, Anatomy of Pig                                             | PPT<br>Chalk & Talk | 5                     |                            |                |                        |                          |
| 6.                                            |                      | Pig on Hadoop, Pig Philosophy                                           | PPT<br>Chalk & Talk | 6                     |                            |                |                        |                          |
| 7.                                            |                      | Use case for Pig, Pig Latin Overview                                    | PPT<br>Chalk & Talk | 7                     |                            |                |                        |                          |
| 8.                                            |                      | Data types in Pig, Running Pig, Execution Modes of Pig,                 | PPT<br>Chalk & Talk | 8                     |                            |                |                        |                          |
| 9.                                            |                      | HDFS Commands, Relational Operators, Eval Function, Complex Data Types, | PPT<br>Chalk & Talk | 9                     |                            |                |                        |                          |
| 10.                                           |                      | Piggy Bank, User Defined Function, Pig Vs Hive.                         | PPT<br>Chalk & Talk | 10                    |                            |                |                        |                          |

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| <b>MODULE-5</b>                               |                      |                                                    |                  |                       |                            |                |                        |                          |
| 1.                                            |                      | Spark, Introduction to Data Analysis with Spark    | PPT Chalk & Talk | 1                     |                            |                |                        |                          |
| 2.                                            |                      | Text, Web Content and Link Analytics: Introduction | PPT Chalk & Talk | 2                     |                            |                |                        |                          |
| 3.                                            |                      | Text Mining                                        | PPT Chalk & Talk | 3                     |                            |                |                        |                          |
| 4.                                            |                      | Web Mining                                         | PPT Chalk & Talk | 4                     |                            |                |                        |                          |
| 5.                                            |                      | Web Content and Web Usage Analytics                | PPT Chalk & Talk | 5                     |                            |                |                        |                          |
| 6.                                            |                      | Page Rank                                          | PPT Chalk & Talk | 6                     |                            |                |                        |                          |
| 7.                                            |                      | Structure of Web                                   | PPT Chalk & Talk | 7                     |                            |                |                        |                          |
| 8.                                            |                      | Analyzing a Web Graph.                             | PPT Chalk & Talk | 8                     |                            |                |                        |                          |
| 9.                                            |                      | Revision                                           | PPT Chalk & Talk | 9                     |                            |                |                        |                          |
| 10.                                           |                      | Revision                                           | PPT Chalk & Talk | 10                    |                            |                |                        |                          |

|                    | Activity                                         | Planned | Actual             | Remarks |
|--------------------|--------------------------------------------------|---------|--------------------|---------|
| 1                  | Theory Classes                                   | 40      |                    |         |
| 2                  | Assignments/<br>Quizzes/Self-study               | 3       |                    |         |
| 3                  | Tutorials/ Extra classes                         | 2       |                    |         |
| 4                  | Internal Assessments                             | 3       |                    |         |
| 5                  | ICT based Teaching<br>(% of usage in Curriculum) | 100     |                    |         |
| <b>Planning</b>    |                                                  |         | <b>Execution</b>   |         |
| Faculty Signature: |                                                  |         | Faculty Signature: |         |
| HoD Signature:     |                                                  |         | HoD Signature:     |         |