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| **Department:** Information Science and Engineering | **Course Type:** Elective |
| **Course Title:** Business Analytics | **Course Code**:17ISE744 |
| **L-T-P**: 4-0-0 | **Credits:** 04 |
| **Total Contact Hours**:52 hrs | **Duration of SEE:** 3 hrs |
| **SEE Marks:** 50 | **CIE Marks**: 50 |

**Course Outcomes:** Students will be able to

|  |  |  |
| --- | --- | --- |
| **CO’s** | **Course Learning Outcomes** | **BL** |
| CO1 | Describe the importance of business analytics for creating the successful business. | L2 |
| CO2 | Explain the importance of descriptive statistics for online transaction/ analytical processing. | L2 |
| CO3 | Describe the benefits of using data warehousing in archiving large quantity the business data in structured way. | L2 |
| CO4 | Apply web and social networking analysis concept on business data for gaining the insights, correlation and customer interests. | L3 |
| CO5 | Summarize Future Impacts how key performance indicators influence the business operations. | L2 |

**Teaching Methodology:**

* Blackboard Teaching
* Power point presentation

**Assessment Methods**

* Group Discussion for 10 Marks.
* Case study for 10 Marks.
* Three internals, 30 Marks each will be conducted and the Average of best of two will be taken.
* Final examination, of 100 Marks will be conducted and will be evaluated for 50 Marks.

**Course Outcome to Programme Outcome Mapping**

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|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** | **PSO1** | **PSO2** |
| **CO1** | 3 |  |  |  |  |  |  |  |  |  |  |  |  | 2 |
| **CO2** | 3 |  |  |  |  |  |  |  |  |  |  |  |  | 2 |
| **CO3** | 3 |  |  |  |  |  |  |  |  |  |  |  |  | 2 |
| **CO4** | 3 | 2 | 3 |  |  |  |  |  | 1 | 1 |  |  |  | 2 |
| **Co5** | 3 |  |  |  |  |  |  |  |  |  |  |  |  | 2 |
| **17ISE744** | 3 | 2 | 3 |  |  |  |  |  | 1 | 1 |  |  |  | 2 |

**Course content**

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| --- | --- |
| **Unit – I** | **12 Hrs** |
| Introduction to Business Analytics: Why Analytics, Business Analytics: the Science of data driven decision making, Descriptive Analysis, Predictive Analytics, Prescriptive Analytics, Big Data Analytics, Web and Social media Analytics, Machine Learning Algorithms, Framework for data driven decision making, Analytics Capability Building, Roadmap, Challenges, Types (Descriptive, Predictive and Prescriptive), | |
| **Unit – II** | **10Hrs** |
| Descriptive Analytics: Business Intelligence versus Business Analytics, Transaction Processing v/s Analytic Processing, OLTP v/s OLAP, OLAP Operations, Data models for OLTP Introduction, Data Types and Scales, Types of Data Measurement Scale, Population and Sample, Types of Data Measurement Scale | |
| **Unit – III** | **10 Hrs** |
| Data Warehouse: Definition, characteristics, framework Data lake Business Reporting, Visual Analytics: Definition, concepts, Different types of charts and graphs, Emergence of data visualization and visual analytics, Sentiment analysis Background, Business Challenge, Methods and the Benefits, Sentiment Analysis Applications, Methods for Polarity Identification, Methods for Polarity Identification, Using a Lexicon, Using a Collection of Training Documents Identifying Semantic Orientation of Sentences and Phrases, Identifying Semantic Orientation of Document | |
| **Unit – IV** | **10 Hrs** |
| Web Analytics: Web Analytics Technologies, Web Analytics Metrics, Web Site Usability, Traffic Sources, Visitor Profiles, Conversion Statistic, Social Network Analysis, Social Network Analysis Metrics, Connections, Distributions, Segmentation, Social Media Analytics, Measuring the Social Media Impact, Best Practices in Social Media Analytics | |
| **Unit – V** | **10 Hrs** |
| Business Analytics: Emerging Trends and Future Impacts, Location-Based Analytics for Organizations, Geospatial Analytics, Real Time Location Intelligence, Analytics Applications for Consumers, Impacts of Analytics In Organizations: An Overview, New Organizational Units, Restructuring Business Processes and Virtual Teams, Job Satisfaction, Job Stress and Anxiety, Analytics Impact on Managers Activities and Their Performance, Issues of Legality, Privacy, and Ethics, An Overview of the Analytics Ecosystem | |

**Textbooks:**

* U. Dinesh Kumar, “Business Analytics – The Science of Data Driven Decision Making”, Wiley 2017.
* Ramesh Sharda, DursunDelen, Efraim Turban, “Business Intelligence: A Managerial Perspective on Analytics”, Pearson, 3e.

**Reference Books:**

* Wasserman, S., & Faust, K. (1994). Social Network Analysis: Methods and Applications. A classic, essential textbook on SNA.
* Jesper Thorlund &Gert H.N. Laursen, “Business Analytics for Managers: Taking Business Intelligence Beyond”, Wiley
* Sahil Raj, “Business Analytics”, Cengage
* James R. Evans, “Business Analytics”, Pearson