

NIRMA UNIVERSITY

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| Institute: | Institute of Technology |
| Name of Programme: | Master of Computer Application (2-Years Programme) |
| Course Code: | 3MCAD306 |
| Course Title: | Business Data Analytics |
| Course Type: | Departmental Elective |
| Year of Introduction: | 2021-22 |

Credit Scheme

| L | T | Practical Component | | | | C |
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Course Learning Outcomes (CLO):

At the end of the course, students will be able to –

1. explain how business analytics is used to formulate and solve business problems
2. apply the processes needed to develop, report, and analyse business data
3. identify and use various business analytics, integration, and reporting software
4. analyze data modelling and related tools

Syllabus:

Total Teaching hours: 45

| Unit | Syllabus | Teaching hours |
|----------|---|----------------|
| Unit-I | Introduction to Business Intelligence: Introduction to OLTP and OLAP, BI Definitions & Concepts, Business Applications of BI, BI Framework, Role of Data Warehousing in BI, BI Infrastructure Components – BI Process, BI Technology, BI Roles & Responsibilities | 12 |
| Unit-II | Basics of Data Integration (Extraction Transformation Loading): Concepts of Data Integration, Need and Advantages of using Data Integration, Introduction to Common Data Integration Approaches, Introduction to Extraction Transformation Loading (ETL) using Integrated Services Tools, Introduction to Data Quality, Data Profiling Concepts and Applications | 12 |
| Unit-III | Introduction to Multi-Dimensional Data Modeling: Introduction to Data and Dimension Modeling, Multi-Dimensional Data Model, ER Modeling vs. Multi-Dimensional Modeling, Concepts of Dimensions, Facts, Cubes, Attribute, Hierarchies, Star and Snowflake Schema, Introduction to Business Metrics and KPIs, Creating Cubes using Analysis Services tool | 12 |
| Unit-IV | Basics of Enterprise Reporting: Introduction to Enterprise Reporting, Concepts of Dashboards, Balanced Scorecards, Introduction to Reporting Services Tool, Enterprise Reporting using Reporting Services Tool | 09 |



Self-Study: The self-study contents will be declared at the commencement of semester. Around 10% of the questions will be asked from self-study contents.

- Suggested Readings/References:
1. David Loshin, Business Intelligence, Elsevier Science.
 2. Mike Biere, Business intelligence for the enterprise, Prentice Hall PTR.
 3. Larissa Terpeluk Moss, Shaku Atre, Business intelligence roadmap, Addison-Wesley.
 4. Cindi Howson, Successful Business Intelligence: Secrets to making Killer BI Applications, Tata McGraw-Hill.
 5. Brain, Larson, Delivering business intelligence with Microsoft SQL server, McGraw Hill Professional.
 6. Stephen Few, Information dashboard design, O'Reilly Media

Suggested List of Experiments: -NA-

Suggested Case List: -NA-