

Module	Detailed Contents	Hrs
01	<p><b>Module: Data Warehousing and OLAP:</b></p> <p>Data warehouse: Introduction to DW, DW architecture, ✓  ETL process, ✓  Top- down and bottom-up approaches, ✓  characteristics, and benefits of data mart.  Dimensional Modeling:  Star, ✓  Snowflake, ✓  and Fact Constellation Schemas, ✓  major features and functions of OLAP,  OLAP models-  ROLAP  and MOLAP,  and the difference between OLAP and OLTP. ✓</p> <p><b>Self Learning Topics:</b> Study any one DW implementation</p>	08
02	<p><b>Module: Data Analytics :</b></p> <p>Data Analytics Overview, ✓  Importance of Data Analytics, ✓  Types of Data Analytics,  Descriptive Analytics, ✓  Diagnostic Analytics, ✓  Predictive Analytics, ✓  Prescriptive Analytics, ✓  Benefits of Data Analytics, ✓  and Data Visualization Techniques. ✓</p> <p><b>Self Learning Topics:</b> Case Studies of Data analytics.</p>	06
03	<p><b>Module: Data Pre-processing:</b></p> <p>Introduction to data mining, ✓  knowledge discovery- KDD process.</p> <p>Data Preprocessing: ✓  Types of Attributes;  Data Cleaning – ✓  Missing Values; ✓  Noisy Data; ✓  Data Integration ✓  and Transformations. ✓  Data Reduction – ✓  Data cube aggregation,</p>	07

	dimensionality reduction, data compression, numerosity reduction, discretization, and concept hierarchy.	
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**Self Learning Topics:** Data normalization