



# Professional Postgraduate Program in Data Warehousing and Business Intelligence for BFSI (PPGP-DW)

(Autonomous, full-time, 6 months, residential Program in association with **Riskraft Consulting Limited**)



The Management Decision Making Process (MDMP) of any business organization operating in a competitive market environment is necessarily data driven. To answer strategic business questions, business managers require organizational business data as well as market data in a format that they understand and can manipulate. This calls for an information management approach that is fundamentally different from the traditional Management Information System (MIS) approach.

Business strategists and analysts need to have access to an information repository that is analysis ready, which is technically known as Data Warehouse. Once a Data Warehouse is in place business needs to know how to leverage and exploit such information to the advantage of the business. Business Intelligence provides the tools, methodology and processes to use information for managing business, increasing profitability, productivity and efficiency.

Although the discipline of Data Warehousing has matured beyond recognition in the last decade or so, availability of a comprehensive post-graduate level program on Data Warehousing and Business Intelligence is lacking in India, although the requirements of trained Data Warehousing professionals in the IT industry as well as in different industry verticals have grown manifold.

## Eligibility:

Science / Engineering / Management graduates and postgraduates with good understanding of IT and databases. Experience and exposure to BFSI industry would be an added advantage.

## Curriculum

### Basic Courses

#### **CS001 / CS002 Life Skills Development - I / II (Each 20 Hours):**

The Life Skills Development Program prepares students for communication and interaction in an organizational set-up. The focus would be on grammar, vocabulary, spoken English, remedial English, presentation skills, debates, group discussions, team building, time management, cross-cultural communication, creative and business writing. The objective of this course is to develop individuals with high intelligence and emotional quotients, who are also competent speakers of English. At the end of the Life Skills Development Program, students will be well equipped with language skills, soft skills and life skills to meet the challenges of the corporate world.

### Foundation Courses

**DW501 Basic concepts of Database and Information Management System (60 Hours):** This course focuses on the basic concept of database as store of organizational information that is capable of supporting multiple applications and discusses its evolution from traditional mainframe databases to relational databases. The basics design principles like Entity-Relation diagram; the object oriented data modeling concepts are also introduced. The evolution of information management system from file system to decision support system is discussed in-depth.

**DW502 Basic concepts of Data Warehouse and its components (80 Hours):** This course identifies the basics characteristics of a Data Warehouse as different from an OLTP database. It introduces different components of DW-ETL, Database, Metadata and OLAP and presentation and query tool used in DW.

**DW503 Basic concepts of Data Mining, Data Visualization and its applications in various industry verticals (48 Hours):** The course focuses on Data Mining in terms of various case studies in different business verticals where data mining techniques were used to derive business advantages. The usage of BI techniques are discussed through a case studies based approach.

### Core Courses

**DW601 Advanced Dimensional Modeling (140 Hours):** This course focuses on techniques of Data Warehouse design, development and deployment techniques. The techniques of dimensional modeling are discussed with practical examples from different business sectors.

**DW602 Data Quality and Data Governance (24 Hours):** This course focuses on techniques of data quality management like data profiling etc. Various master management issues and techniques are covered in detail.

**DW603 Data Warehouse Architectural Issues and Project Management (28 Hours):** This course focuses on DW architectural issues like Data Mart, Corporate Information factory, Federated DW etc. The DW warehouse project management issues and the critical success factors for a successful DW implementation are discussed with real life examples.

**DW604 Data Warehouse and Business Intelligence Tools (24 Hours):** This course focuses on various features of different DW tools including ETL tools, Query tools and visualization tools. This module is highly hands on / practice oriented.

### Advanced Courses

**DW701 Data Mining Techniques (160 Hours):** This course focuses on all important Data Mining techniques like Clustering, Decision Tree, Neural Network, Forecasting, Market Basket Analysis etc.

**DW701 Recent trends in Data Warehousing (16 Hours):** This course focuses on recent developments in DW and BI areas like DW appliances, DW2.0, Active Data Warehouse etc.

### Project

**DW801 Project (130 Hours):** Students will be given an industry sponsored project in the areas of Data Warehousing and Business Intelligence to build a DW with all its components following the entire life cycle of a DW project. Students can also take up in-house projects under the guidance of the faculty and/or industry experts in their area of expertise. Students are encouraged to work on projects that will enhance their understanding in certain application domains in real-life scenario. The project report has to be submitted to the Institute in the prescribed format, and which will be examined by experts nominated by the Institute. The project is the culmination of the student's learning in the Institute and is expected to be of high standards as demanded by the industry from time to time.

Program Structure			
Level	Subject Code	Subject Name	Hours
Basic	CS001	Life Skills Development I	20
	CS002	Life Skills Development II	20
Foundation	DW501	Basic concepts of Database and Information Management System	60
	DW502	Basic concepts of Data Warehouse and its components	80
	DW503	Basic concepts of Data Mining, Data Visualization and its applications in various industry verticals	48
Core	DW601	Advanced Dimensional Modeling	140
	DW602	Data Quality and Data Governance	24
	DW603	Data Warehouse Architectural Issues and Project Management	28
	DW604	Data Warehouse and Business Intelligence Tools	24
Advanced	DW701	Data Mining Techniques	160
	DW702	Recent trends in Data Warehousing	16
Project	DW801	Project	130