Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned			
		L	**T**	**P**	**L**	**T**	**P**	**Total**
MCAL41	**Data warehousing and Mining & Business Intelligence Lab**	--	--	4	--	--	2	2
		Examination Scheme						
		Term Work		**Practical**		**Oral**		**Total**
		40		10		10		60

Pre-requisite Course Codes	DBMS(MCA33), Mathematics, DW	
	Student will be able to	
Course Outcomes	**CO1**	Learn how to build a data warehouse and query it (using open source tools).
	CO2	Learn to perform data mining tasks using a data mining toolkit (using open source tool).
	CO3	Understand the data sets and data preprocessing.
	CO4	Learn dimension modelling tool for BI
	CO5	Design ETL project using open source tool

Exp. No.	Experiment Details	Ref.	Marks
1	Unit-I Build Data Warehouse • Setting Up and Starting Warehouse Builder • Introducing OWB Architecture and Configuration • Defining Source Metadata • Ensuring Data Quality Using Data Profiling • Defining Staging Metadata and Mapping Tables	1,3	5
2	• Deriving Data Rules and Running Correction Mappings • Defining a Relational Dimensional Model • Handling Slowly Changing Dimensions	1,2	5
3	**Study of OLAP** • Analytical Queries • Grouping Functions • Windowing Functions • RollUp and Cube	1,4	5
4	Open source tool for study of • Using Classification Models • Using Regression Models • Using Clustering Models	2,3	5
5	**Study of Open Source BI Tools** • Preparing Reports • Preparing Dashboards • Preparing Balanced Score Cards and Analysis of Reports	2,3	5
6	ETL working with open source tool	3	5
7	Dimensional modelling tool working	3	5

8	Beyond the Syllabus -Simple Project on Data Preprocessing	1,2	5
	Total Marks		40

References:

[1] Carlo Vercellis, "Business Intelligence data mining and optimization for decision making", wiley publication.

[2] Zbigniew Michlewicz, martin Schmidt, matthew michalewicz, constantin Chiriac, "Adaptive business Intelligence", Springer-Verlag Berlin Heidelberg, First edition

[3] Ralph Kimball and Margy Ross, "The Data Warehouse Toolkit: The Definitive Guide to Dimensional Modeling", John Wiley and Sons, 2013 , Third Edition

[4] Chaudhuri and Dayal, "An Overview of Data Warehousing and OLAP Technology", Sections 1-7 (available on Blackboard)