Code	Data Warehouse & Data Mining	2 Hours/Week	2 Units

Contents of Syllabus	Hours

❖ **Introduction**
  ▪ History of Data
  ▪ History of data warehousing
  ▪ What is a Data Warehouse
  ▪ Reasons for building Data warehouse
	2

❖ **2. Granularity**
  ▪ The Benefits of Granularity
  ▪ An Example of Granularity
	2

❖ **3. Differences between Operational Database Systems and Data Warehouses**	2

❖ **4. A Multidimensional Data Model**
  ▪ Data Cube
  ▪ Stars, Snowflakes, and Fact Constellations: Schemas for Multidimensional Data Models
  ▪ OLAP Operations on a multidimensional data model
	6

❖ **5. Data Mining philosophy**
  ▪ Why is data mining
  ▪ Data Mining Definition
  ▪ Mining Objectives
	4

❖ **6. Data Mining Activities or tasks**
  ▪ Data Mining Algorithms
  ▪ Data Mining Process
  ▪ KDD Process
	4

❖ **7. Association rules algorithms**
  ▪ Cyclic Association Rules
  ▪ Classification
  ▪ Clustring
  ▪ Mining the World Wide Web
  ▪ Visual and audio data mining
  ▪ Detecting Intrusions by Data Mining
	8

Textbooks:

1-. "Data Mining and Warehousing". "Prabhu, S., and N. Venkatesan ,Published by New Age International (P) Ltd., Publishers. 2007.

References:

1- 1. W. H. Inmon"Building the Data Warehouse", Fourth Edition. Published by Wiley Publishing, Inc, Indianapolis, Indiana, 2005

2. Bhansali, Neera. "Strategic Data Warehousing: Achieving Alignment with Business". CRC Press. United States of America. 2010.

3. Wang, John. "Encyclopedia of Data Warehousing and Mining". Second Edition. Published by Information Science Reference. United States of America. 2009.

4. Data Mining: Concepts and Techniques, Third Edition By Jiawei Han (Author), Micheline Kamber (Author), Jian Pei (Author), 2011