

INT217:INTRODUCTION TO DATA MANAGEMENT

L:0 T:0 P:4 Credits:2

Course Outcomes: Through this course students should be able to

CO1 :: apply the various techniques and functions over spreadsheet for getting various insides of data

CO2 :: understand the data representation methods like pivot table and power pivoting

CO3 :: understand the need of the graphical representation in the spreadsheet by using various graphs and charts

CO4 :: extend the concepts of multidimensional data and topics like OLAP, OLTP and data cube

CO5 :: demonstrate the ETL process using the SSIS tool and able to perform pre-processing for data analysis

Unit I

Introduction to Microsoft Excel : UI Basics : introduction to UI basics, about excel, workbooks and worksheets, customizing excel, reference styles, number formatting, custom number formatting, conditional formatting, format as table

Spreadsheet functions to organize data : cell reference styles, creating and working with formulas, text functions, date and time functions, lookup and reference functions, mathematical and statistical functions, information and volatile functions, logical and financial functions, formula auditing, error handling, string functions

Unit II

Data representation and manipulation : filter, advanced filter for complex criterion, sorting and custom sorting, pivot table and pivot chart, power pivot, import data from different sources into power pivot, reducing file size in power pivoting, connect to multiple different external datasets

Unit III

Advanced graphing and charting : charts, combo charts, working with objects charts, dynamic charts and dynamic data source for charts print areas, views for a worksheet, various printing techniques

Data protection techniques : worksheet protection, protect specific range, workbook protection and encryption

Unit IV

Building a model : introduction to building a model, about model and assumptions, diagramming the flow with exercise, wireframing with exercise, preparing the data with exercise, linking up formulas with exercise, sensitivity analysis with exercise, case study: forecasting with a model

Unit V

Multidimensional data : ETL overview, extracting data, transformations, loading data, simple ETL processing, ETL tools, data sources and destinations, OLTP and OLAP, multidimensional data models, data cube

Unit VI

Data Processing using Tableau Prep : introduction to tableau prep, installing tableau prep, basics of data preparation, connecting to data, creating data flow, blend data sources, cross-database join, project task, tableau prep for business

References:

1. MICROSOFT EXCEL 2016 BIBLE: THE COMPREHENSIVE TUTORIAL RESOURCE by JOHN WALKENBACH, WILEY
2. FUNDAMENTALS OF BUSINESS ANALYTICS by R.N. PRASAD, SEEMA ACHARYA, WILEY