



SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

(Established under section 3 of the UGC Act 1956)

Re - accredited by NAAC with 'A' Grade

Founder: Prof. Dr. S. B. Mujumdar, MSc, Ph.D. (Awarded Padma Bhushan and Padma Shri by President of India)

Sub Committee - Specialization for Curriculum Development

Course Name : Data Management and Visualization

Course Code : T3664

Faculty : Computer Studies

Programme Type : PG

Course Credit : 3

Course Level : 4

Sub-Committee (Specialization) : IT Infrastructure Management

Batch : 2021

Learning Objectives :

- To understand the basics of data management
- To identify the challenges in data management and its visualization
- To understand various applications of data management
- To evaluate the impacts of data visualization on business process management

Books Recommended :	Book	Author	Publisher
	Interactive Data Visualization: Foundations, Techniques, and Applications.	Ward, Grinstein Keim,	Natick: A K Peters, Ltd.
	Data Modeling Essentials, Third Edition, by	Graeme C. Simsion and Graham C. Witt	Morgan Kaufmann
	Master Data Management in Practice, The Visual Display of Quantitative Information	Dalton Cervo, Mark Allen E. Tufte,	Wiley Corporate F&A Graphics Press.

Course Outline :	Sr. No.	Topic	Hours
	1	Structured vs unstructured data, Master data vs transactional data, Systems of Record vs. Systems of Reference, Data Life Cycle, Data hierarchies, On Premise/Cloud computing, Foundational and Accounting Information Systems (i.e GL, AR, AP), data challen	10
	2	Database modeling, Entity Relation models, Data Normalization, Managing data structures (Cost Center, Profit Center, Consolidation entities, Legal Entities, Budget, Fiscal/Calendar periods, Chart of accounts), Data modeling considerations when dealing wit	10
	3	Introduction of visual perception, visual representation of data, Gestalt principles, information overloads. Creating visual representations, visualization reference model, visual mapping, visual analytics, Design of visualization applications.	10
	4	Classification of visualization systems, Interaction and visualization techniques misleading, Visualization of one, two and multi-dimensional data, text and text documents.	8
	5	Visualization of volumetric data, vector fields, processes and simulations, Visualization of maps, geographic information, GIS systems, collaborative visualizations, evaluating visualizations	7

Pre Requisites :

Basics of Analytics

Evaluation :

Assignment

case studies

Class test

Project

Presentation

Pedagogy :

Lecture & Discussion

Case analysis

Article analysis

Quizzes

Project presentation

Expert :

Dr. Parag Kaveri,,SICSR