CS804 VISUALIZATION ANALYSIS AND DESIGN 3-0-0-3

Visualization Fundamentals: Introduction to visualization-The visualization pipeline- Data types, models, and representations-Tools, languages, and libraries-Marks and Channels- Color and color theory- Human perception and cognition

Visual Attention and Information: Searching the visual field- Reading from the iconic buffer-the Gabor Model and Texture Visualization - Texture Coding Information- Glyphs and Multivariate Discrete Data.

Static and Moving Patterns: Gestalt Laws-Perception of Transparency-Patterns in Motion

Visual Objects and Data Objects: Image-based Object Recognition- Structure Based Object Recognition- Object Display and Object –Based Diagrams- Perceiving the surface shape of objects

Space Perception and Display of Data in Space: Depth Cue Theory-Task-based space Perception

Interacting and Thinking with Perception: Data Selection and Manipulation Loop-Exploration and Navigation Loop-Memory Systems-Eye Movements-Problem Solving with Visualization

TEXT BOOKS/ REFERENCES:

1. Colin Ware, "*Information Visualization: Perception for Design* by Second Edition, Elsevier, The Morgan Kaufmann Publishers, 2004.

2. Tamara Munzner, "*Visualization Analysis and Design*" AK Peters Visualization series, CRC Press, 2014