

**Course Title: Introduction to visualizing academic research (Elective Course)**

**Credits: 2**

**Duration:** January 2019 to April 2019

**Day and Time:** Monday and Wednesday (11:30 am to 1:30 pm)

**Instructor:** Dr. Anisha Malhotra Dalvi

**Course Outline:**

Visualization is the graphical presentation of information, which may be available in the form of data, processes, relations, or concepts. It transforms raw data into useful information which aids in better understanding and interpretation of data and its relationships. Visual representation and data visualization in academic research have been noted for securing the readers' interest and enhancing their retention than common graphs (circles, area, points, bars and lines) (Borkin et. al, 2013). Furthermore, the process of designing and creating visualizations helps in understanding the data, and may aid in generating useful insights and inferences.

This course will introduce participants to key design principles, basics of visual design, visualization methods, and its applications. During the course, you will learn to create information hierarchy and design visual codes to illustrate raw data in order to build meaningful inferences. We will discuss examples from protocol analysis on visualizing communication processes and how visual narratives are designed to present information.

Assessment will be based on short visualization exercises and one final visualization project where data collected from fieldwork has to be visualized.

**References (List may be elaborated later):**

- A Borkin, Michelle & A Vo, Azalea & Bylinskii, Zoya & Isola, Phillip & Sunkavalli, Shashank & Oliva, Aude & Pfister, Hanspeter. (2013). What Makes a Visualization Memorable?. IEEE transactions on visualization and computer graphics. 19. 2306-15. 10.1109/TVCG.2013.234.
- Goldschmidt, G. (2014). *Linkography: Unfolding the Design Process*. MIT Press.
- McCloud, S. (1994). *Understanding comics: [the invisible art]*. New York: HarperPerennial.
- Stanczak, Gregory C. (2007). *Visual research methods : image, society, and representation*. Thousand Oaks, [Calif.] : Sage Publications.
- Tufte, Edward R. (1991). *Envisioning Information*. Graphics Press, Cheshire, CT.
- Tufte, Edward R. (2006 ). *Beautiful Evidence*. Graphics Press, Cheshire, CT.
- Tufte, Edward R. (1997). *Visual Explanations: Images and Quantities, Evidence and Narrative*. Graphics Press, Cheshire, CT.