

# PSY 6610/7610 Seminar - Scientific Graphics

Tuesdays, 1 - 3:00 pm, UH 5150 G

Ricky Heffner UH 5608

Office Hours Tuesdays, 12:15-1:00, 3:00-4:45, and by appointment

Ricky.Heffner@utoledo.edu

## TextBooks

Kosslyn, S.M. 2006. Graph Design for the Eye and Mind. Oxford University Press.

Tufte, E.R. 2001. The Visual Display of Quantitative Information. Graphics Press.

This class will focus on application and not theory. As such you will not be reading a large number of journal articles for discussion (only a few). However there is some reading and you will be poring over journal articles both in and outside of your area looking at graphs for inspiration and entertainment.

In the first part of the course, you will search in the scientific literature for at least two graphs that illustrate good and poor design examples of whatever is the topic for each class meeting. Post these to the Discussion Board for the date as files. Annotate them with your comments as to good and poor features and we will discuss them in class.

In the latter part of the course you will learn to use a good graphing program and practice making professional looking graphs of your own. We'll even design a poster.

Aug 20	Why Graph In class short statistics exercise with data tables
Aug 27	Kosslyn, Ch 1 Eye and Mind Tufte, Time Series pp 28-43, Data Density pp 161-175
Sept 3	Kosslyn, Ch 2 Choosing a Format Tufte, Gridlines and Junk pp 112-121
Sept 10	Kosslyn, Ch. 3 Creating a Framework Tufte, Data/Ink ratio pp 122-125, Proportion and Scale pp 184-190
Sept 17	Kosslyn, Ch 4 Pie Graphs, Divided Bars, Visual Tables Kosslyn, Ch 5 Bar Graph Variants Tufte, Redesign of the Bar Chart pp126-129, Choice of Design pp178-183

Sept 24	Kosslyn, Ch 6 Line Graphs and Scatterplots Tufte, Redesign of the Scatterplot pp130-137 Doherty & Anderson, 2009 (pdf in Blackboard)
Oct 8	Kosslyn, Ch 7 Color, Fill, etc Tufte, Chartjunk pp. 107-112
Oct 15	Kosslyn, Ch 8 “Lies, Damned Lies, and Statistics” Tufte, Graphical Integrity pp 54-77
Oct 22	Learning a graphing program that does your bidding (Draggin Chart or Kaleidagraph)
Oct 29	Practice with the program; Graph the data provided for the cost of candy bars
Nov 5	Complete a graph of your own data (real or imaginary) for discussing in class
Nov 12	Bring to class a more complex graph of data in your field (or someone else’s field) and we will discuss them in class
Nov 19	Tufte, Aesthetics pp 177-190 Trends in Neuroscience article on posters Begin to design a poster around data in your field, maybe even a poster you hope to present
Nov 26 or Dec 3	Bring a complete draft of a poster; Bring at least 3 copies and we will exchange these in class for editorial comments and revise them accordingly
Dec 3 or Dec 10	Polish posters in class and turn them in