# CMSC 435 / 634 Introduction to Computer Graphics

## Homework Assignment: Colors

1. Color is a property of objects that our minds create – an interpretation of the world around us. Color is an immensely complex subject drawing knowledge from many disciplines including physics, physiology, perceptual psychology, art, and graphic design. Many color models are proposed and are suitable to different uses. Explain the following concepts:
    a. Hue, saturation, lightness, brightness
    b. Color gamut, color space
    c. Perceptually equivalent color space. Please provide at least two examples of such a color space.
    d. Given an RGB cyan color (0., 0.8, 0.8), what is the corresponding HSV color space representation? Please plot the corresponding points in both RGB (cube) and HSV (cone) color space accordingly.
    e. List two Dos and to Donts related to choosing an appropriate color mapping to represent data to colors.
    f. Can I use colors to represent quantitative information? Why or why not?