**Object Recognition and Scene Understanding**

**Short Course Outline:**
1. Introduction
2. Single class object detection:
   2.1 Overview
   2.2 Template matching and gradient histograms
3. Thousands of categories
   3.1 Levels of categorization
   3.2 Multiclass object recognition
4. 3D object models
   4.1 Explicit and implicit 3D object models
5. Objects in context
   5.1 Scenes and objects
6. Internet vision
   6.1 The power of lots of data
7. Low and Mid-level vision
   7.1 Low level vision
   7.2 Edges, regions and textures
8. Grammars for objects and scenes
   8.1 Grammars and topic models
   8.2 Grammar for low, mid and high level vision

**Evaluation:**
Projects at the end of the course

**Schedule**

- July 16th through July 27th 2012

1. Week of July 16 through July 20th: daily classes from 10:00-13:00
2. Week of July 23rd through July 27th: advisory and preparation for final assignments