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Winter 2006

### CEG 725-01: Computer Vision II

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# CEG-725 Computer Vision II

Winter 2006

**Call No.:** 37437

**Instructor:** A. Goshtasby

**Email:** [agoshtas@wright.edu](mailto:agoshtas@wright.edu)

**Lecture:** 4:10 - 5:25, M, W,

**Office Location:** 341 RC

**Office Hours:** 3:00 - 4:00 PM, M, W, or by appointment.

**Location:** 154 RC

**Phone:** 937-775-5170

**No. Units:** 4

**Prerequisites:** CEG-724

**Textbook:**

*Computer Vision: A Modern Approach*

by Forsyth and Ponce

Prentice-Hall 2003

**Additional Reading:** To be posted

**Purpose of Course:**

This course is a continuation of CEG-724 Computer Vision I. In this course the focus will be on recognition of high-level vision processes.

**Contents:**

1. Stereo depth perception
2. Motion analysis
3. Model-based vision
4. Smooth surfaces and their outlines
5. Aspect graphs
6. Range data analysis
7. Classification techniques
8. Relational approaches to recognition
9. Geometric inference using spatial relations
10. Creation of digital image libraries
11. Image-based rendering

**Learning Goals:**

In this course we will learn computer algorithms that interpret images. Some of the techniques will be practiced through computer implementation.

**Projects and Exams:**

There will be three programming assignments, a final project, and a presentation. A typical programming assignment will require about 20 hours of study and programming. Final project will require about 50 hours of study and programming. Each student is also required to read a paper on a topic covered in the course and present it in the class.

**Grading Policy:**

Programming assignments will worth 45%, the presentation will worth 10%, class participation will worth 5%, and the final project will worth 40% of the overall grade. Grades will be assigned as follows. A: [91..100], B: [81..90], C: [71..80], D: [61..70], F: [0..60].

**Calendar:**

Assignment 1	Handed out: 1/09/06; Due:1/18/06
Assignment 2	Handed out: 1/23/06; Due: 2/01/06
Assignment 3	Handed out: 2/06/06; Due: 2/20/04
Presentations	Assigned: 2/22/04; To be delivered: 3/01/04 .. 3/13/04
Final Project	Handed out: 2/22/04; Due: 3/15/04