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Fall 2007

CEG 724: Computer Vision I

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CEG-724 Computer Vision I

Fall 2007

CRN: 81038 **Lecture:** 6:05 - 7:20 PM, MW, **Location:** 393 Millett
Instructor: A. Goshtasby **Office Location:** 495 Joshi **Phone:** 775-5170
E-mail: agoshtas@wright.edu **Office Hours:** 2:00-4:00, TR, or by appointment.

No. Units: 4

Textbook:

Computer Vision: A Modern Approach
by Forsyth & Ponce
Prentice Hall, 2003

Purpose of Course:

This course covers basic techniques for low-level and some mid-level vision. The techniques include: camera geometry, image filtering and edge detection, color and texture analysis, image segmentation, and stereo depth perception.

Contents: The following chapters in the textbook will be covered.

1. Introduction
2. Image formation and camera models
3. Camera calibration
4. Image filtering
5. Edge detection
6. Color and texture analysis
7. Image segmentation
8. Model-based vision
9. Motion and tracking
10. Stereo depth perception

Learning Goals:

In this course we will learn computer algorithms that extract information from images and algorithms that process such information to describe the contents of images. Some of the techniques will be practiced through computer implementation.

Projects and Exams:

There will be four programming assignments and four 30-minute quizzes.

Grading Policy:

Programming assignments will worth 50% and quizzes will worth 50% of the overall grade. Following grades are guaranteed A: 90..100, B: 80..89, C:70..79, D: 60..69, E: 0..59.

Calendar:

| | |
|--------------|--------------------------------------|
| Assignment 1 | Assigned: 9/17, due: 9/26, 6:00 PM |
| Assignment 2 | Assigned: 10/1, due: 10/10, 6:00 PM |
| Assignment 3 | Assigned: 10/15, due: 10/24, 6:00 PM |
| Assignment 4 | Assigned: 10/29, due: 11/14, 6:00 PM |
| Quizes | 9/19,10/3, 10/17, 10/31 |