

Winter 2008

CEG 725-01: Computer Vision II

Arthur A. Goshtasby

Wright State University - Main Campus, arthur.goshtasby@wright.edu

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CEG-725 Computer Vision II

Winter 2008

CRN: 21483

Instructor: A. Goshtasby

Email: agoshtas@wright.edu

Lecture: 2:45- 4:00 PM, M, W,

Office Location: 495 Joshi

Office Hours: 1:00 - 2:00PM, M, Tu, W, Th, or by appointment.

Location: 140 HS

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 handed out in class.

Purpose of Course:

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

Contents:

1. Stereo depth perception (ch11)
2. Structure from motion (ch12)
3. Object tracking (ch17)
4. Model-based vision (ch18)
5. Shape from shading and photometric stereo (ch05)
6. Range data analysis (ch21)
7. Smooth surfaces and their outlines (ch19)
8. Aspect graphs (ch20)
9. Recognition by finding patterns (ch22)
10. Matching by relations (ch23)
11. Application: Creation of digital image libraries (ch25)

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, three quizzes, a final report, and a presentation. A typical programming assignment will require about 20 hours of study and programming. Final report and presentation will also require about 20 hours of study and preparation. Each student will be assigned a paper to read, prepare a 5-page report, present the paper in class.

Grading Policy:

Programming assignments will worth 40%, the presentation and report will worth 20%, and the quizzes 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: To be posted

Assignment 1	Handed out: 1/16	Due: 1/30
Assignment 2	Handed out: 1/30	Due 2/13
Assignment 3	Handed out: 2/13	Due 2/27
Presentations	Assigned: 2/18	
Quizzes	On 1/23, 2/6, 2/20	