

Fall 2005

CEG 724: Computer Vision I

Arthur A. Goshtasby

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

Follow this and additional works at: https://corescholar.libraries.wright.edu/cecs_syllabi



Part of the [Computer Engineering Commons](#), and the [Computer Sciences Commons](#)

Repository Citation

Goshtasby, A. A. (2005). CEG 724: Computer Vision I. .
https://corescholar.libraries.wright.edu/cecs_syllabi/26

This Syllabus is brought to you for free and open access by the College of Engineering & Computer Science at CORE Scholar. It has been accepted for inclusion in Computer Science & Engineering Syllabi by an authorized administrator of CORE Scholar. For more information, please contact corescholar@www.libraries.wright.edu, library-corescholar@wright.edu.

CEG-724 Computer Vision I

Fall 2005

Call No.: 17357 **Lecture:** 6:05- 7:20, M, W, **Location:** 144 Russ
Instructor: A. Goshtasby **Office Location:** 341 RC **Phone:** 937-775-5170
E-mail: agoshtas@wright.edu **Office Hours:** 1:00 - 3:00 PM, M,W , or by appointment.

No. Units: 4

Prerequisites: CS-600, MTH-230, MTH-253

Textbook:

Machine Vision: Theory Algorithms, Practicalities
Third Edition
by E. R. Davies
Morgan Kaufmann, 2005

Purpose of Course:

This course covers basic techniques for low-level and some mid-level vision processing. The techniques include: image filtering, intensity thresholding, edge detection, 2-D shape analysis, line and circle detection, corner detection, pattern matching.

Contents:

1. Introduction
2. Image Operations
3. Image Filtering
4. Image Segmentation by Intensity Thresholding
5. Image Segmentation by Boundary Detection
6. 2-D Shape Analysis
7. Line Detection
8. Circle Detection
9. Hough Transform
10. Corner Detection
11. Pattern Matching

Learning Goals:

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

Projects and Exams:

There will be three programming assignments, a midterm exam, and a final project. Programs should be submitted electronically or handed in on PC disks.

Grading Policy:

Programming assignments will worth 40%, midterm will worth 25%, and final project will worth 30%. and class participation will worth 5% 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: 9/19/05	Due: 9/28/05, 6:00 PM
Assignment 2	Handed out: 9/18/05	Due: 10/10/05, 6:00 PM
Assignment 3	Handed out: 10/10/05	Due: 10/19/05, 6:00 PM
Midterm Exam	On 11/02/05, 6:05 - 7:20 PM	
Final Project	Handed out: 10/24/05	Due: 11/10/05, 6:00 PM