LE415: Digital Image Processing

Thammasat University

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Office hours: Students are encouraged to contact the instructor via e-mail for quick questions regarding homework and course material.
Web site: http://songyot.ece.engr.tu.ac.th/LE415/

Prerequisite: Pass LE210

Course description:

Historical development of image processing. Image data structures. Image preprocessing. Image enhancement. Image classification. Image postprocessing. Image compression and restoration. Figure modeling. Computer animation. Contour mesh conversion. Applications of image processing. Introduction to computer vision.

Very Tentative Schedule

Topic 1	Introduction
Topic 2	Digital Image Fundamentals
Topic 3	Image Enhancement (in the spatial and frequency domains)
Topic 4	Image Restoration
Topic 5	Image Compression
Topic 6	Morphological Image Processing
Topic 7	Image Segmentation
Topic 8	Color Image Processing

Textbooks:

1. Rafael C. Gonzales and Richard E. Woods, Digital Image Processing, 3rd Ed. Prentice-Hall, New Jersey, 2010.
2. Chris Solomon and Toby Breckon, Fundamentals of Digital Image Processing: a Practical Approach with Examples with MATLAB, John Wiley & Sons, 2011.
   Book website: http://www.fundipbook.com

Grading: 10% Attendance, 30% homework, 30% midterm, 30% final.

Programming: The best way to understand an algorithm is to program it. Students will have to complete individual assignments required in each homework assignment using MATLAB.

Image Viewer Software: www.xnview.com

Homework Policy: Discussion of material covered in class is strongly encouraged, but the homework you submit must be your own work. Copying and using another person's work is not allowed.