SYDE 575   Image Processing   Fall 2014

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TA (half):   Javad Shafiee   mjshafiee@uwaterloo.ca

Text: **Digital Image Processing,** 3rd edition, by Rafael C. Gonzalez and Richard E. Woods, Pearson Prentice-Hall, 2008.

Lectures: Tuesday 9:30-11am, Thursday, 11:30am-1pm, E5-6004

Tutorial: Thursday, 10:30-11:30am, E5-6004

Lab: Wednesdays, 1:30-4:30pm, E2-1306

Website: http://www.eng.uwaterloo.ca/~dclausi/sd575.html

Expectations:

1. Problems will be provided as the course proceeds, but will not be collected or marked. If you have difficulty with the problems, consult the TA or instructor. Solutions will be provided at a later date, after you have had a try to solve them. Some solutions will also be presented during tutorials.

2. There is one introductory lab (not graded) plus five graded labs. Lab reports will be required and will comprise 20% of the final mark. Labs should be completed in groups of two or three (two is probably best). The grade of each lab will be reduced by 20% for each full or partial day late submission.

3. A mid-term exam worth 30% will be held on Thursday October 30 during combined tutorial and class time (1.5 or 2 hours).

4. A final exam during the December exam period will comprise the remaining 50%.

Course Outline

Topic	Basic Readings
I. Introduction	1 & 2
II. Point Operations	3.1-3.3
III. Spatial Filters	3, 10.2
IV. Spatial-Frequency Filters	4
V. Restoration	5
VI. Color Image Processing	6
VII. Segmentation	9,10
VIII. Image and Video Compression	8
IX. Wavelets (time permitting)	7
X. Representation (time permitting)	11

Institutional Requirements for Course Outline

All course outlines in the Faculty of Engineering require the following verbatim boiler-plate statements.