

# **SYSTEMS DESIGN ENGINEERING**

## **Image Processing Applications**

**SYDE 770 - Topic 1**

**Spring**

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The course starts by a brief review of the essential Image Processing Techniques with emphasis on new methods for Image Segmentation, Edge Detection, Shape Representation and Image Based Rendering. Following this review the course focuses on three types of applications: Visual Inspection, Document Image Analysis and Biomedical Applications.

In each of these applications, we will take case studies of some specific tasks and study how image processing techniques are applied. The students will have the opportunity to practice the use of the methods on real data from these applications. The project component of the course will provide the opportunity for the students to develop and implement some recent and innovative techniques for these applications.

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INSTRUCTOR: Mohamed Kamel  
Email: [mkamel@uwaterloo.ca](mailto:mkamel@uwaterloo.ca)