

**CEN 546**  
**Digital Image Processing**  
**First Semester 1429/1430H**  
**College of Computer & Information Sciences**  
**King Saud University**

**Time:** **Monday:** 3:45-6:15 PM @ Room: A 051, Building: 31  
**Instructor:** Dr. Ghulam Muhammad  
**Office:** 2191, Building 31  
**Homepage:** <http://faculty.ksu.edu.sa/ghulam/>  
**Email:** ghulam@ccis.ksu.edu.sa

**Text:** Rafael C. Gonzalez and Richard E. Woods, "Digital Image Processing", 3E, Prentice Hall.

**Reference:** William K. Pratt, "Digital Image Processing", 3E, John Wiley & Sons.

**Grading:** **Presentation:** 10%  
**Two Midterm Exams:** 40%  
**Final Exam:** 50%

**Course Outline**

	<b>Topic</b>
1	Digital Image Fundamentals: image formation, sensing, sampling & quantization.
2	Intensity Transforms, Histogram Processing, Spatial Filtering.
3	Filtering in Frequency Domain.
4	Image Reconstruction, Noise Reduction.
5	Wavelets and Multiresolution Processing.
<b>Midterm Exam – I on 3/12/1429 (December 1, 2008)</b>	
6	Image Compression.
7	Morphological Image Processing.
8	Image Segmentation, Edge Detection.
9	Image Recognition.
<b>Midterm Exam – II on 22/1/1430 (January 19, 2009)</b>	
10	Image Processing Applications, Television Signal Transmission.

Note: Please find lecture notes in my website.