Course Syllabus

Term:
Fall 1386 (2007)

Instructor:
S. Kasaei
Associate Professor in Signal Processing
Room CE307
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Lecture:
Saturdays & Mondays, 15:00-16:30, Room Motalea 2.

Website:
The course website can be found at:
http://ce.sharif.edu/courses/86-87/1/ce823/
Please check this site often for important announcements, files needed for computer exercises, and the PDF versions of handouts & homework.

Course Description:
40-823+ provides an insight to advanced image processing theory and techniques.
Topics include: 2-D system theory, 2-D random processing, image transforms with particular emphasis on wavelet transform, advanced image enhancement, advanced image filtering and restoration, advanced image analysis, image/video compression, biometric techniques, advanced motion estimation, content-based image retrieval, and image/video watermarking.

Prerequisites:
40-763 (Digital Signal Processing) or 40-933 (Digital Image Processing).

Credit:
3 units.

Text Book:
Additional topics will be included (e.g., video compression standards, wavelet transform, …).

Reference Books:

**Written Homework Problems:**
Written homework problems will be assigned by the end of each chapter.

**Computer Excersises:**
Computer assignments will also be assigned over the course. They can be provided either in Matlab or C Languages.

**Course Project:**
There will be a course project, which can be proposed by the student. Students are supposed to present the final result, associated with related software & technical report.

**Exams:**
There will be one midterm and one final exam.

**Grading Policy:**
Written & computer assignments: 3 Points
Term project: 3 Points
Project report: 1 Point
Project presentation: 1 Point
Midterm exam: 3 Points (hold at: Monday 1386.8.28)
Final exam: 9 Points (hold at: Saturday 1386.10.22, 14:30)
Class activities: 1 Point

**Project Topic Confirmation Due:**
Final exam day (not confirmed course projects are not acceptable).

**Instructor Office Hour:**
Wednesdays, 15:00-16:00, Room 307, CE, SUT.

**Teaching Assistants:**
Ms. H. Mohseni, Mr. M. Fotouhe, and Mr. H. Ajorlou