EE6361-501
Digital Signal Processing II (DSP II)
(Spring 2008)

Prerequisites: EE6360 (DSP I),
Also, LabVIEW, Matlab and Computer programming knowledge
Course No: EE6361-501
Credit Hours: 3
Class Schedule: TR ,5:30PM - 6:45PM, **Classroom:** ECSN 2.110

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Teaching Assistant: TBD
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Office Hours:
Telephone:
email:

Course description: This is continuation of EE6360, and includes advanced topics in digital signal processing such as; Digital filter structures and finite word-length effects, Digital filter design and implementation methods, Multirate digital signal processing, Linear prediction and optimum filtering, Spectral analysis and estimation methods.

Textbook: **Digital Signal Processing, by John G. Proakis and Dimitris G. Manolakis, Fourth Edition, Prentice Hall, 2007. ISBN: 0-13-187374-1**

Assignments: Homework and projects from the textbook, journal papers, or other sources.

Exams: One midterm and one final exam. Both exams must be taken by every student. Exam may be in the form of in-class or take-home exam, or special project & report, paper review & report, or programming assignment & report.

Grading: Final grade for the course will include (1) average of equally weighted homeworks- 20%, (2) projects- 40%, (3) exams- 40%.

Special Note: Use of mobile/cellular phone, computer/Laptop, PDA, or other electronic devices or equipment is not allowed during the class or exam sessions. All such systems must be turned off and not used during class and exam sessions without prior permission.

Student Learning Objectives/Outcomes: Student is expected to demonstrate the ability to:

1. Analyze and design digital filters using S/W tools such as LabVIEW or Matlab.
2. Analyze and implement sampling rate conversion methods using polyphase structures for decimation and interpolation filters.
3. Analyze and implement linear prediction and optimum linear filtering techniques.
4. Analyze and implement parametric and non-parametric spectral estimation methods.