ECE 468  DIGITAL SIGNAL PROCESSING

Instructor:  Dr. Ada Chen  E-mail: adachen@siu.edu  Tel: 453-7060
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Teaching Assistant:  Mr. Raghuveer Kanneganti  E-mail: kraghu@siu.edu
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Text:  A.V. Oppenheim & R.W. Schafer

Topics:
       Review of discrete time signals and systems
       The z-transform
       The discrete Fourier transform (DFT)
       Computation of the DFT
       Digital filter design
       Realizations of digital filters
       Laboratory: MATLAB experiments

Prerequisite:  EE 355 Signals & Systems

Grading:

   Grades will be computed based on the following:
   Exam 1  20%
   Exam 2  25%
   Exam 3  25%
   Laboratory  20%
   Homework  10%

Please note:
1. The grading scheme will be strictly followed. There will be NO exceptions.
2. It is your responsibility to keep track of all assignments and announcements made in the class and in the laboratory.
3. All assignments should be turned in promptly. Late homework/report will be penalized 10% per day.
ECE 468 Laboratory

Teaching Assistant: Mr. Raghuveer Kanneganti [kraghu@siu.edu]

Office Hours: TBA

List of Experiments

1. Sequence generation
2. Discrete Convolution
3. Impulse response computation
4. Discrete time Fourier transform (DTFT) – frequency response
5. Sampling
6. z-transform
7. z-transform
8. Discrete Fourier transform (DFT) and the Inverse Discrete Fourier Transform
9. DFT properties
10. Circular Convolution
11. Block Filtering
12. Analog filter design
13. Digital IIR filter design
14. Digital FIR filter design