EE 435/635
Design and Implementation of Analog and Digital Filters
Winter 2001  Credit Hours = 4

Instructor : Dr. Arnab K. Shaw
Office No. : 427 Russ
Phone No.: 775-5064 (or 5037)  FAX No.: 775-3936
Email : ashaw@wright.edu
Office Hrs.: 9:30-10:00AM; 2:00-3:00PM (Tues, Thur) and by appointment


Supplemental Class Notes: Instructor has prepared detailed notes which will be closely followed throughout the course. Copy of the notes will be placed at EE Department and students are requested to copy the notes before classes meet. Some course handouts may also be provided in class.

References :

Course Outline
• Filter Definitions, Specifications and Applications
• Butterworth and Chebyshev Low Pass (LP) Filter Approximation
• Frequency Transformation: LP ↔ HP, BP, BR
• Analog Filter Design : Passive Circuits using L, C and R
• Analog Filter Design : Active Circuits using Operational Amplifiers
• Digital IIR Filter Design - Impulse Invariant and Bilinear Transformations
• Theory and Design of Switched Capacitor Filters
• Structures and Realizations of Digital IIR Filters

Grading

Homeworks and Computer Projects (7-8 sets)  20%
Mid-term I : (January 27, 2005)  25%
Mid-term II : (February 24, 2005)  25%
Final (Comprehensive) : (Thursday, March 17, 2003 : 10:45AM to 12:45 PM)  30%
Notes

- The Instructor will be available during the posted office hours for discussions and clarification of topics covered in the class. If the suggested hours are inconvenient, students are welcome for discussion at other times. However, students are advised to call beforehand to make sure of Instructor’s availability. Discussion via email is also encouraged.
- Homework sets and computer projects (about 7-8 sets in all) will be distributed throughout the quarter. Students are urged to work on these independently.
- Students scoring 90% or above will automatically receive an A grade, those scoring below 50% will automatically receive an F grade. The remaining grades will be decided based on class average/distribution and will range from A to F.

Important: Please note that, in accordance with the standard college policy, Scholastic Dishonesty of any kind would result in a prompt F grade on the course. There will be NO make-up examinations (Mid-Terms or Final) barring extreme circumstances (injury or illness certifiable by a qualified physician). The students are advised to inform the instructor regarding inability to attend prior to the examination.