

EE 4383/5371, FALL 2001 HOMEWORK/Proj. #6

ASSIGNED: 10/18/01 (Thursday)

DUE: **PART A: October 24, 2001 (Wednesday) by 4:30 PM** in my office (Eng. 339A)
(staple it and slip it under the door)

PART B: October 26, 2001 (Friday) by 2:30 PM in Marty's office (Eng. 339A)

OFFICE HRS: Mon.,Tue.,Thur.: 1:30 – 2:30
Wed none
Friday 11:00 – 12:00 noon

Handouts can be downloaded and printed from:

http://www.ece.utep.edu/test/faculty/sergio_cabrera/ee4383.htm

TO-DO FOR THIS HOMEWORK:

A. FROM PROAKIS-MANOLAKIS, HANDOUTS

Reading: From our textbook: **4.2.9 (contrast with O-S)**
From O-S book handout Sects **3.1 – 3.4**

Do Problems:

EE4383 only: From O-S handout: **3.1**
Both From O-S handout: **3.4; 3.6; 3.10 a), b); 3.11**
EE5371 only From O-S handout: **3.9**

B. MATLAB ASSIGNMENT Read **Sect. 8.2.4** in our textbook and the relevant background in the Matlab book by McClellan et. al. then do:

Same thing for both classes:

1. **Ex. 1.1 page 271** . What are the passband and stopband ripples δ_1 and δ_2 for this resulting filter (measure them from plots on linear or dB scale)
- 2- Re-do the design in Ex. 1.1 page 271 but this time make the two ripples different. Make the passband ripple 10 time bigger than the stopband ripple ($\delta_1 = 10 \delta_2$) by proper use of the error weighting option in the *remez* command. Compare these new ripples with those in Prob. 1 above.