

UNIVERSITY OF TEXAS AT DALLAS
Department of Electrical Engineering

EE 6390 - Introduction to Wireless Communications Systems
Problem Set #10: OFDM

Date assigned: 4/10/2008

Date due: 4/17/2008

Late homework will not be accepted. Please check the course web site for updates.

Reading: *Wireless Communications*, chs. 13 and 15

Please use MATLAB to help you solve these problems, check answers, etc.

Problem 10.1 OFDM

Problem 12.4(a) and (c) in *Wireless Communications*. For part (c), assume that instantaneous

$$\text{BER} = 0.2e^{-1.5\gamma/(M-1)}$$

for modulation with constellation size M . *Hint: Find the average BER for Rayleigh fading using the above expression with average SNR per carrier $1000/n$ where n is the carrier index.*

Problem 10.2 OFDM

Problem 12.16 in *Wireless Communications*