

CARLETON UNIVERSITY
Department of Systems and Computer Engineering

SYSC 4600

Digital Communications

Fall 2016

Assignment 3

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Posted on: **Wednesday, 10 October 2016**

Due on : **Will not be collected (for studying purposes only)**

Study the following sections from the textbook:

If you have “Communication Systems, 4th edition, Haykin”:

Chapter 4: Baseband Pulse Transmission

- Section 4.1 Introduction
- Section 4.2 Matched Filter
- Section 4.3 Error Rate Due to Noise

If you have “Communication Systems, 5th edition, Haykin & Moher”:

Chapter 8: Baseband Digital Transmission

- Section 8.1 Introduction
- Section 8.2 Baseband Pulses and Matched Filter Detection
- Section 4.3 Probability of Error Rate Due to Noise

Answer the following questions from the textbook:

- Matched Filters
 - (1) Problem 4.1 (4th ed.) = Problem 8.1 (5th ed.).
 - (2) Problem 4.2 (4th ed.), does not exist in 5th ed.
 - (3) Problem 4.3 (4th ed.) = Problem 8.4 (5th ed.).

- Probability of Error Calculation
 - (4) Problem 4.5 (4th ed.), does not exist in 5th ed.
 - (5) Problem 4.9 (4th ed.), does not exist in 5th ed.
 - (6) Problem 4.10 (4th ed.), does not exist in 5th ed.