

COSC 244 Tutorial
From Lecture 5, 6

1. What is a parity bit?
2. Do the binary division T/G, in which $T = 11011001001$, $G = 10101$
3. Suppose you want to transmit the data 1100 1001 0101 and the generator polynomial is $x^3 + x + 1$. What bit string should be sent?
4. A sender has the following data to send:

1001 0110

Construct a bit stream containing a 4-parity-bit Hamming code for the data.

5. The following data containing a 4-parity-bit Hamming code is received:

0001 0100 0011

Is the data correct? If not, what was the correct bit stream?

6. If there are two bits changed in a bit stream, does Hamming code work correctly?
7. Discuss how to use Hamming codes to correct burst errors?
8. Distinguish between error correction and error detection.