

## **EENG 410 Homework #4**

1. Assume the 8-symbol sequence [0 1 1 1 1 1 0 0] is received by a system using an Orthogonal(8,3) code. Determine the most likely 3-bit message sent.
2. Calculate the cross-correlation coefficients for an Orthogonal(8,3) code if the received sequence is [0 1 0 0 0 1 1 1]. What would be your recommended decision in this case?
3. Determine  $B_4$ .
4. Assume the 8-symbol sequence [1 1 1 1 0 1 1 1] is received by a Bi-orthogonal(16,4) code system. Determine the most likely 4-bit message sent.
5. Determine the bandwidth expansion of a Trans-orthogonal(63,6) code.