

Term Project

The term project for EE571 is intended to expose students to a specific area in digital communications. Students will be required to build and design a package to simulate the bit error rate performance of the following system:

Bit-interleaved coded modulation (BICM) using a (7,4) Hamming code and M-PSK.

Each student is expected to build the complete communication system comprising of the following:

1. Transmitter including encoder, interleaver and modulator.
2. AWGN Channel.
3. Receiver including iterative decoder and demodulator.

Students have to consider the following cases in their simulation:

1. Effect of the packet size by varying it from 100, 500, 1000 coded bits.
2. Effect of the constellation size, $M=4, 8$ and 16.
3. Effect of the number of iterations: 1, 2, 3, 5.

In **week 15** of the semester, each student is expected to submit **a complete report, present his work and compare his results** with results of a reference on coded modulation.

Deadline to submit the final report of the project is May 12, 2015.

Note: Please copy and sign the following on your project final report cover:

I testify to Allah that I will not refer to any ready code by any means and in any form and from any source, before I submit the final project report to my instructor