Department: Mathematics and Computer Sciences
Division: Applied Mathematics
Level and Major: Graduate

Course Title: Coding Theory 1
Number of Credits: 3
Prerequisite: Algorithm and calculation, Information theory
Lecturer:

Course Description:

Course Goals and Objectives:

Course Topics:

- Block codes and linear codes
- Generator and parity check matrices
- Finite fields
- Polynomials and computations over finite fields
- Cyclic codes and their constructions
- BCH and Reed-Solomon codes
- Reed-Muller codes
- Hadamard, Quadratic residue codes
- Convolutional codes
- LDPC codes, constructions

Reading Resources:

Evaluation: