

Sched#21870 MATH 625 Sec 1 ALGEBRAIC CODING THEORY

Instructor: Dr. Roxana Smarandache, GMCS 577, ph. 619-594-5971
e-mail: rsmarand@sciences.sdsu.edu
webpage: <http://www.rohan.sdsu.edu/~rsmarand>

Class: TTh, 4-5:15 pm, GMCS-328.

Off. hours: Tu 11:00 am -12:00 pm, Tu 3:00-3:45 pm.

Textbook: "The Theory of Information and Coding" by Robert McEliece.
Useful reference books:
"Introduction to the Theory of Error-Correcting Codes" by Vera Pless,
"The theory of Error-Correcting Codes" by F.J.MacWilliams and N.J.A. Sloane.

Topics:

- Linear codes
- Cyclic codes
- BCH and RS codes (including the Berlekamp-Massey algorithm) - Convolutional codes (generator matrices, state diagrams, decoding). - Other topics as time permits. Class related material will be posted on blackboard.

Prerequisites: Abstract Algebra.

Grading: Homework, class exams (60%) and projects 40%.

Furlough Days: The SDSU administration has asked all professors to designate 9 days as days on which they will be on furlough. There will be no classes on the following days: Feb. 2, May 6, May 11.