MA3202 R01, Fall 2017
Introduction to Coding Theory

Tuesday & Thursday, 2:05 pm - 3:20 pm, Fisher 131

Professor Dr. Vladimir D. Tonchev
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Office hours: MWTR 11:00 am -12:00 pm, or by appointment.

Text: Vera Pless, *Introduction to the theory of error correcting codes*, Wiley, Third Edition

Objectives: Error-correcting codes are used for improving the reliability of data transmission. This course is an introduction to the mathematical theory of coding, with an emphasis on algebraic and combinatorial methods for designing good codes and decoding algorithms. Topics include encoding and decoding of linear codes, bounds on the minimum distance, perfect codes, Hamming codes, Golay codes, Reed-Muller codes, cyclic codes, and quadratic residue codes.

Prerequisites: MA2320 or MA2321 or MA2330.

Grading will be based on homework and written exams.
Handwritten or late homework will not be graded.

Grading Scale:

$$90\% \leq A,\ 85\% \leq AB < 90\%,\ 80\% \leq B < 85\%,$$
$$75\% \leq BC < 80\%,\ 70\% \leq C < 75\%,\ 65\% \leq CD < 70\%,\ 60\% \leq D < 65\%$$

Schedule:

Day	Section
T 9.05	1.1
R 9.07	1.2
T 09.12	1.3
R 09.14	2.1
T 09.19	2.2, 2.6
R 09.21	2.3

T 09.26	2.4
R 09.28	**Review**
T 10.03	**Test 1**
R 10.05	2.5
T 10.10	3.1, 3.2
R 10.12	3.3, 3.4
T 10.17	4.1, 4.2
R 10.19	4.3
T 10.24	4.4
R 10.26	5.1
T 10.31	**Review**
R 11.02	**Test 2**
T 11.07	5.2
R 11.09	5.3
T 11.14	5.4
R 11.16	6.1
T 11.28	6.2, 6.3
R 11.30	6.4, 6.5
T 12.05	7.1
R 12.07	Review
T 12.12	Exam 3
R 12.14	Review

This schedule is **subject to change**. Changes, if any, will be announced in class.