

Coding Theory for the Classroom?

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The curriculum for the Austrian “Handelsakademie” (= College for Business Administration) does not contain only Cryptography” but also “Coding Theory”. I took these chapters as one of the co-authors of a textbook series without knowing the intentions of the authors of the curriculum.

It was a challenge to find issues in Coding Theory which are beyond of only discussing the ASCII-Code and presenting ISBN- and EAN-Code and which are suitable for the students (age 17).

We will explain and work with data compressing like the Huffman-Code and with self correcting codes like the Hamming-Code. We will also show many questions which lead the students to a better understanding of the problems.

The workshop will comprise various classroom activities (answering questions of comprehension, short proofs, encoding and decoding by paper and pencil, encoding and decoding using provided tools, following instructions to create own tools, ...). No previous knowledge is needed. CAS- and spreadsheet tools will support the activities.

Keywords: Coding Theory, Technology