Poznan University of Technology
Faculty of Electronics and Telecommunications

European **C**redit **T**ransfer **S**ystem

Title **Coding Theory**	Code **1018321910108010125**
Field **Electronics and Telecommunications**	Year / Semester **5 / 9**
Specialty **Telecommunication Systems**	Course **core**
Hours Lectures: **2** Classes: **2** Laboratory: **2** Projects / seminars: **-**	Number of credits **8**
	Language **polish**

Lecturer:

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Status of the course in the study program:

Obligatory course, Faculty of Electronics and Telecommunications, field Electronics and Telecommunications, specialization: Communication Systems

Assumptions and objectives of the course:

Knowledge of most important classes of error-correcting and detecting codes and their decoding methods

Contents of the course (course description):

Idea of redundant coding, code classification, methods of block code description, polynomial codes, cyclic codes, Galois fields and their application in construction of block codes, algebraic and non-algebraic decoding of block codes, non-binary codes, method of description of convolutional codes, algebraic and sequenctial decoding of convolutional codes, turbo-codes and their decoding, trellis coding, LDPC coding

Introductory courses and the required pre-knowledge:

Basic knowledge of communication systems and information theory, and field algebra

Courses form and teaching methods:

Lectures in the form of multi-media presentations, classes based on problems solving, and laboratory exercises.

Form and terms of complete the course - requirements and assessment methods:

Credit based on tests in the 7th and 14th week of the semester, conducted laboratory experiments and reports on the achieved results, written exam on the theory.

Basic Bibliography:

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Additional Bibliography:

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