

Title Digital Communication Systems	Code POZ04WTS2ICC01
Field Electronics and Telecommunications	Year / Semester autumn
Specialty Information and Communication Technologies	Course core
Hours Lectures: 2 Classes: 2 Laboratory: - Projects / seminars: -	Number of credits 5

Lecturer:

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Status of the course in the study program:

Obligatory course in the field of studies Electronics and Telecommunications (Faculty of Electronics and Telecommunications)

Objectives of the course:

The course aims at getting acquainted with theoretical foundations of digital communication systems

Course description:

Sources of digital signals for communication systems, baseband transmission, digital modulations of a sinusoidal carrier (ASK, PSK, FSK and QAM), optimum coherent and non-coherent receiver, continuous phase modulations, trellis coded modulations, multitone OFDM transmission, properties of the most important type of transmission channels, channel equalization, sequential detection, timing and carrier synchronization algorithms and structures, examples of digital communication systems

Initial knowledge:

Basic knowledge in communication systems, signal theory and statistics and probability theory

Teaching methods:

Lectures and classes

Assessment methods:

Written examination, test for classes

Bibliography:

1. Introduction to Digital Communication Systems, K. Wesolowski, John Wiley & Sons, Chichester, 2009
2. Communication Systems, 4th ed., S. Haykin, John Wiley & Sons, New York, 2001
3. Digital Communications, 4th ed., J. G. Proakis, McGraw-Hill, New York, 2000