

Title Introduction to Telecommunications	Code 1010321261010320171
Field Electrical Engineering	Year / Semester 3 / 6
Specialty -	Course core
Hours Lectures: 2 Classes: - Laboratory: 1 Projects / seminars: -	Number of credits 4
	Language polish

Lecturer:

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Status of the course in the study program:

Obligatory subject, Faculty of Electrical Engineering, Field: Electrical Engineering, Full Time studies

Assumptions and objectives of the course:

Knowledge of theoretical and practical subjects related to the ideas, techniques and principles of operation of telecommunications systems.

Contents of the course (course description):

Social importance of telecommunications, introduction to information theory, types of telecommunications systems, analog and digital signals, spectral representation of signals, analog modulation techniques, pulse modulation and pulse - code modulation PCM, methods of spread spectrum, types and properties of line codes, electrical and optical transmission media, connection and connectionless modes, multiplexing methods: TDM, FDM, WDM, large telecommunication systems, an introduction to waves and antennas (TEM wave, the types and characteristics of antennas, radio wave propagation in free space, energy balance, propagation of radio waves in the troposphere and ionosphere), mobile systems (GSM, WiFi).

Introductory courses and the required pre-knowledge:

Basic knowledge of informatics and mathematics.

Courses form and teaching methods:

Lectures, supported by slides, laboratory exercises.

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

Written examination, credits for laboratory exercises.

Basic Bibliography:

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Additional Bibliography:

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