

Title <b>Telecommunications Systems</b>	Code <b>POZ04WTS2ICC09</b>
Field <b>Electronics and Telecommunications</b>	Year / Semester <b>autumn</b>
Specialty <b>Information and Communication Technologies</b>	Course <b>core</b>
Hours Lectures: <b>2</b> Classes: <b>2</b> Laboratory: -    Projects / seminars: -	Number of credits <b>5</b>

**Lecturer:**

dr in

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**Status of the course in the study program:**

Obligatory course for students of Electronics and Telecommunications

**Objectives of the course:**

Making students familiar with the basic ideas of telecommunications, their techniques and principles of design and maintenance of telecommunication systems

**Course description:**

Characteristic of telecommunication: social meaning, past and future; telecommunication services; telecommunication channel; signals and systems; random signals; analog modulations of harmonic carrier; modulation and demodulation processes; noise characteristics of analog modulations; pulse-code modulations; source coding; digital modulations of harmonic carrier; baseband and passband transmission; multiplexing; error correcting codes and transmission codes; PDH and SDH;

**Initial knowledge:**

Mathematical analysis, signal theory, basics of analog and digital circuits and systems, probabilistic theory

**Teaching methods:**

Lectures, computational exercises,

**Assessment methods:**

Test, written exam

**Bibliography:**

1. Communication systems, S. Haykin, Wiley, 2001
2. Modern Digital and Analog Communication Systems, B. P. Lathi, Zhi Ding, Oxford University Press, 2010
3. Electronic Communication Systems, W. Schweber, Prentice Hall, 2007