

Title <b>Signals and Dynamic Systems</b>	Code <b>1010331121010330277</b>
Field <b>Control Engineering and Robotics</b>	Year / Semester <b>1 / 2</b>
Specialty -	Course <b>core</b>
Hours Lectures: <b>2</b> Classes: <b>1</b> Laboratory: -    Projects / seminars: -	Number of credits <b>4</b>
	Language <b>polish</b>

**Lecturer:**

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

Obligatory course, Faculty of Electrical Engineering, field Control Engineering and Robotics.

**Assumptions and objectives of the course:**

Acquaintance of the basic knowledge about signals in both time and frequency domains and its transformation in linear dynamic systems.

**Contents of the course (course description):**

Signals, its energy and power. Complex signals. Statistical parameters of signals. Fourier and Laplace transforms. Linear models of dynamic objects, temporal and spectral characteristics. Signals, correlation and power spectrum density in linear dynamic systems. Sampling theorem. Statistical parameters estimation based on DFT.

**Introductory courses and the required pre-knowledge:**

The basic knowledge of complex numbers theory, ordinary differential equations, probability theory.

**Courses form and teaching methods:**

Computer aided lectures and graphical presentations.

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

Written exam.

**Basic Bibliography:**

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**Additional Bibliography:**

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