Title **Computing science in energetics**	Code **1010334451010310569**
Field **Computer Science**	Year / Semester **3 / 5**
Specialty **-**	Course **core**
Hours Lectures: **1** Classes: **-** Laboratory: **8** Projects / seminars: **-**	Number of credits **3**
	Language **polish**

Lecturer:

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Status of the course in the study program:

Obligatory course, Faculty of Electrical Engineering, field Computer Science, first-degree non-stationary study.

Assumptions and objectives of the course:

Getting to know principles of converting signals and methods of the synthesis of algorithms for measure and decision-making in the electric power engineering.

Contents of the course (course description):

Converting signals in measuring systems of the electrical power engineering system: analogue signals, analog-digital conversion, preliminary digital processing: fitting and the filtration of signals, synthesis of recursive and nonrecursive filters, digital correlation, filtration of symmetrical components, methods of ortogonalisation of signals, transfer of signals for power system purposes. Measuring-decision-making algorithms: logical?time functions, logical structures of systems of automation for electric power system, practical applying of decision-making algorithms.
Sources of measuring errors in measuring ? decision-making algorithms, transitional state of algorithms, dynamic correction of errors. Integration of systems of controlling and operation of power system, satellite system of the area synchronization of sampling.

Introductory courses and the required pre-knowledge:

Basic knowledge about systems and phenomena occurring in the electrical power system in normal and disrupted states.

Courses form and teaching methods:

Lectures and laboratory exercises with using multimedia techniques and simulation programs.

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

The current control of the activity, the final test.

Basic Bibliography:

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Additional Bibliography:

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