

Title Metrology	Code 1018011210108000056
Field Electronics and Telecommunications	Year / Semester 1 / 2
Specialty -	Course core
Hours Lectures: 1 Classes: - Laboratory: 2 Projects / seminars: -	Number of credits 3
	Language polish

Lecturer:

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Status of the course in the study program:

Obligatory course for students of Electronics and Telecommunications

Assumptions and objectives of the course:

Introduction to the basis of metrology terminology, measurements methods and equipment. To provide students with the skills for analyze experimental data and present results of measurement. To introduce students to practical laboratory experience of prepare, organize and conduct measurements.

Contents of the course (course description):

Basic definitions and terms of metrology. Methods, principles and procedures of measurements. Statistics in metrology. Point and range estimation. Uncertainty and error in direct and indirect measurements. Calculation of the total standard uncertainty. Measurements with analog and digital oscilloscopes. Digital measurements of frequency and period. Analogue and digital measurements of voltage, current and resistance. Metrological attributes of modern measuring instruments. Selected characteristics of analog and digital measurements.

Introductory courses and the required pre-knowledge:

Fundamentals of mathematics, physics and circuit theory

Courses form and teaching methods:

Lectures illustrated by multimedia presentations, laboratory with 12 experiments.

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

Tests in laboratory, written and oral examination.

Basic Bibliography:

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Additional Bibliography:

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