Title of Course	**Automation and Measurements of Physical Quantities**		
Semester	**Autumn/Spring**		
Teaching Hours per Course:	**Total**	**- Lectures:**	**- Tutorials:**
	30	30	-
ECTS Credits	2		
The content of education			
Aims of Course	This course focuses on automation and measurements of physical quantities. The student will obtain information about measurements, instrumentation and automatics equipment, measuring systems, as well as industrial automation and automatic regulation. Student will learn to design automation schemes and choose proper equipment required in technological process.		
Program	L1. Basic terms used in metrology; L2. Fundamentals of calculus of errors and estimation of measurement uncertainty; L3. Operational amplifier; L4. Measuring instruments and converter circuits; L5. Measurement systems; L6. Temperature measurements; L7. Pressure, flow and level measurements; L8-9. Designing Digital Logic Circuits; L10. Digital control system; L11. Spectral analysis of automation systems; L12-13. Timing analysis of automation systems; L14. Stability of automation systems; L15. Regulators;		
Conditions of completion	Written test Pass mark: 51% Marks: 51-60% 3 61-70% 3,5 71-80% 4 81-90% 4,5 91-100% 5		
Teacher	Jakub Lęcki, M.Sc.		