FACULTY:	Department of Mechanical Engineering
FIELD OF STUDY:	Transport
ERASMUS COORDINATOR OF THE FACULTY:	Dr hab. inż. Agnieszka Kułakowska, Prof. PK
E-MAIL ADDRESS OF THE COORDINATOR:	agnieszka.kulakowska@tu.koszalin.pl
COURSE TITLE:	Electronics
LECTURER'S NAME:	Konrad Zajkowski
E-MAIL ADDRESS OF THE LECTURER:	konrad.zajkowski@tu.koszalin.pl
COURSE CODE (USOS):	3
ECTS POINTS FOR THE COURSE:	3,5
ACADEMIC YEAR:	2025/2026
SEMESTER: (W – winter, S – summer)	W
HOURS IN SEMESTER:	W15, 15 L
LEVEL OF THE COURSE: (1st cycle, 2nd cycle, 3rd cycle)	1st cycle
TEACHING METHOD: (lecture, laboratory, group tutorials, seminar, other-what type?)	lecture, laboratory
LANGUAGE OF INSTRUCTION:	English
ASSESSMENT METOD: (written exam, oral exam, class test, written reports, project work, presentation, continuous assessment, other – what type?)	Lecture: project work Laboratory: written reports
COURSE CONTENT:	**D.C. Circuits:** Ohm's and Kirchhoff's laws, Analysis of series, parallel and series-parallel resistive circuits excited by independent voltage sources. Power and Energy in such circuits. **Single Phase A.C Circuits:** Generation of AC voltage, definition of average value, R.M.S value, form factor, peak factor. Phase and phase difference of sinusoidal varying voltage and current. Real power, reactive power, apparent power and power factor. **Three Phase A.C Circuits:** Necessity and advantages of three phase systems. The relationship between line and phase voltage & currents in balanced 3phase Star and Delta connections. **DC and AC Machines:** Working principle of DC and AC machine as a generator and motor. Types and constructional feature. **Transformer:** Principle of operation and construction and types of single phase transformers. E.M.F equation, power losses, efficiency and voltage regulation.
ADDITIONAL INFORMATION:	

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