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| FACULTY: | **Faculty of Mechanical and Energy Engineering** |
| FIELD OF STUDY: | **Mechatronics** |
| ERASMUS COORDINATOR OF THE FACULTY: | Igor Maciejewski, DSc, PhD |
| E-MAIL ADDRESS OF THE COORDINATOR: | igor.maciejewski@tu.koszalin.pl |
| COURSE TITLE: | **Laboratory of digital techniques** |
| LECTURER’S NAME: | Sebastian Pecolt, Eng. PhD |
| E-MAIL ADDRESS OF THE LECTURER: | sebastian.pecolt@tu.koszalin.pl |
| ECTS POINTS FOR THE COURSE: | 2 |
| COURSE CODE (USOS): | 0911>1000-LTC |
| ACADEMIC YEAR: | 2025/2026 |
| SEMESTER:(W – winter, S – summer) | W |
| HOURS IN SEMESTER: | 30 |
| LEVEL OF THE COURSE:  (1st cycle, 2nd cycle, 3rd cycle) | 1st cycle |
| TEACHING METHOD:  (lecture, laboratory, group tutorials, seminar, other-what type?) | Laboratories (30h) |
| LANGUAGE OF INSTRUCTION: | **•English full time scheme for classes with 5 and more International Erasmus+ students enrolled/accepted;**  **•English 50% individually with the teacher + Polish 50% with Polish students or individual project work- scheme for classes with less than 5 International Erasmus+ students enrolled/ accepted;** |
| ASSESSMENT METOD:  (written exam, oral exam, class test, written reports, project work, presentation, continuous assessment, other – what type?) | Project work, written reports |
| COURSE CONTENT: | During laboratory exercises, students must design and implement projects on the FPGA Altera DE0 set. Each project must be practically verified. The material includes the laws of logical algebra, logic gates, combinational logic circuits such as: half adders, full adders, multiplexers, demultiplexers, encoders and decoders also a sequential logic circuits such as circuits include clocks, flip-flops, bi-stabiles, counters, memories, and registers. |
| ADDITIONAL INFORMATION: |  |