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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: | **Real-time computer systems** |
| LECTURER’S NAME: | Leszek Bychto, DSc, PhD |
| E-MAIL ADDRESS OF THE LECTURER: | leszek.bychto@tu.koszalin.pl |
| ECTS POINTS FOR THE COURSE: | 3 |
| ACADEMIC YEAR: | 2024/2025 |
| SEMESTER: (W – winter, S – summer) | W |
| HOURS IN SEMESTER: | 15+15=30 |
| LEVEL OF THE COURSE:  (1st cycle, 2nd cycle, 3rd cycle) | 1st cycle |
| TEACHING METHOD:  (lecture, laboratory, group tutorials, seminar, other-what type?) | Lectures (15h), Classes (15h) |
| 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?) | written exam, project work |
| COURSE CONTENT: | The course aims to provide basic competences in the field of designing and implementation of the microcontroller-based real-time computer systems. Students will be introduced to the core concepts of the real-time systems (RTS), namely: problem of time in RTS, methods of designing and testing RTS etc. During the course, students will develop the ability to create real-time computer systems based on ARM Cortex M4 microcontrollers. |
| ADDITIONAL INFORMATION: | Code 0921>1400-SKCzRz  Prerequisites:  - basic knowledge in the computer programming  - basic knowledge in electronics |
| RECOMMENDED LITERATURE | - J. Valvano, *Real-time interfacing to ARM Cortex M microcontroller*  - J. Valvano, *Embedded systems. Introduction to ARM Cortex-M microcontrollers* |