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| FACULTY: | **Faculty of Electronics and Computer Science** |
| FIELD OF STUDY: | **Computer Science** |
| ERASMUS COORDINATOR OF THE FACULTY: | Marcin Walczak, PhD |
| E-MAIL ADDRESS OF THE COORDINATOR: | marcin.walczak@tu.koszalin.pl |
| COURSE TITLE: | **Computational and Simulation Techniques** |
| LECTURER’S NAME: | Marcin Walczak, PhD |
| E-MAIL ADDRESS OF THE LECTURER: | marcin.walczak@tu.koszalin.pl |
| ECTS POINTS FOR THE COURSE: | 4 |
| COURSE CODE (USOS): | 0711>0400-TOiSym |
| ACADEMIC YEAR: | 2024/2025 |
| SEMESTER: (W – winter, S – summer) | W |
| HOURS IN SEMESTER: | 45 |
| LEVEL OF THE COURSE:  (1st cycle, 2nd cycle, 3rd cycle) | 1st cycle |
| TEACHING METHOD:  (lecture, laboratory, group tutorials, seminar, other-what type?) | Lecture – 30h  Group tutorials – 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?) | Oral exam  Written reports |
| COURSE CONTENT: | The lecture covers the following topics and activities:  Using numerical software such as Matlab or Scilab to model and simulate electronic circuits in both the time and frequency domains.  Utilizing simulation tools like LTspice to model real-life components and analyze electronic circuits.  Applying the mentioned software to compute and evaluate the Fast Fourier Transform (FFT) of any given signal. |
| ADDITIONAL INFORMATION: | Requirements: knowledge of complex numbers, electronic symbols, units and basic components (e.g. resistor, capacitor, diode etc.).  Finished courses: students must have completed the Theory of Signals and Networks course or be taking it in parallel |

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\*kurs dostępny wyłącznie w języku angielskim