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| FACULTY: | **Faculty of Mechanical Engineering** |
| FIELD OF STUDY: | **Mechatronics** |
| ERASMUS COORDINATOR OF THE FACULTY: | Igor Maciejewski |
| E-MAIL ADDRESS OF THE COORDINATOR: | [igor.maciejewski@tu.koszalin.pl](mailto:igor.maciejewski@tu.koszalin.pl) |
| COURSE TITLE: | **Bio-mechatronics** |
| LECTURER’S NAME: | dr hab. inż. Sebastian Głowiński |
| E-MAIL ADDRESS OF THE LECTURER: | [sebastian.glowinski@tu.koszalin.pl](mailto:sebastian.glowinski@tu.koszalin.pl) |
| ECTS POINTS FOR THE COURSE:  COURSE CODE (USOS): | 2 0911>1400-BioMech |
| ACADEMIC YEAR: | 2022/2023 |
| SEMESTER:  (W – winter, S – summer) | Winter |
| 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?) | Projects (30h) |
| LANGUAGE OF INSTRUCTION: | English |
| ASSESSMENT METOD:  (written exam, oral exam, class test, written reports, project work, presentation, continuous assessment, other – what type?) | Project work |
| COURSE CONTENT: | In this course we seek to advance the science of biomechanics and biological movement control. Next we try to apply that knowledge to the projects for design of human rehabilitation and augmentation technology. We build models by using Matlab SimMechanics. It promises to accelerate the merging of body and machine, including device architectures that resemble the body's own musculoskeletal design, actuator technologies that behave like muscle, and control methodologies that exploit principles of biological movement. |
| ADDITIONAL INFORMATION: |  |