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| FACULTY: | **Faculty of Mechanical and Energy Engineering**  Department of Biomedical Engineering |
| FIELD OF STUDY: | **Biomedical Engineering** |
| ERASMUS COORDINATOR OF THE FACULTY: | Igor Maciejewski, DSc, PhD |
| E-MAIL ADDRESS OF THE COORDINATOR: | igor.maciejewski@tu.koszalin.pl |
| COURSE TITLE: | **Fundamentals of biomechanics** |
| LECTURER’S NAME: | Andrzej Błażejewski, Eng. PhD |
| E-MAIL ADDRESS OF THE LECTURER: | andrzej.blazejewski@tu.koszalin.pl |
| ECTS POINTS FOR THE COURSE: | 5 |
| ACADEMIC YEAR: | 2024/2025 |
| SEMESTER: (W – winter, S – summer) | S |
| 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?) | Lectures (30h)  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?) | Project work, presentation, Oral exam |
| COURSE CONTENT: | 1. Introduction to Biomechanics 2. Fundamentals of Biomechanics and Qualitative analysis 3. Anatomical description and its limitations 4. Mechanics of the muscoskeletal systems 5. Linear and angular kinematics of human body 6. Linear kinetics of human body 7. Angular kinetics of human body 8. Fluid mechanics 9. Exoskeletons modelling 10. Injury mechanism 11. Applying biomechanics in sports medicine and rehabilitation |
| ADDITIONAL INFORMATION: | * Basics of Technical Mechanics (Statics, Kinetics) * Basics of Human Anatomy   Code: 0911>1000-Pbm |