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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: | **Medical Physics and Technique** |
| LECTURER’S NAME: | Łukasz Szparaga, PhD |
| E-MAIL ADDRESS OF THE LECTURER: | lukasz.szparaga@tu.koszalin.pl |
| ECTS POINTS FOR THE COURSE: | 3 |
| ACADEMIC YEAR: | 2024/2025 |
| SEMESTER: (W – winter, S – summer) | W |
| HOURS IN SEMESTER: | 60 |
| 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 (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?) | written exam |
| COURSE CONTENT: | To familiarize students with the selected topics in medical physics and techniques. In particular contents related to:   * Basic mathematical concepts in applications to describe physical phenomena. * Basic physical laws used in medical physics. * Mathematical description of radioactive phenomena ( α, β, γ decay reactions). * The law of radioactive decay, mass defect, binding energy. * Principles of measurements in nuclear physics - laboratory experiments. * Elements of statistics in nuclear physics - Poisson and Gauss distributions. |
| ADDITIONAL INFORMATION: | Knowledge of physics, mathematics and biology at the basic level.  Code: 0911>1000-FiTM |