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| FACULTY: | Faculty of Mechanical and Energy Engineering |
| FIELD OF STUDY: | Management and Production Engineering |
| ERASMUS COORDINATOR OF THE FACULTY: | dr hab. inż. Łukasz Bohdal, prof. PK |
| E-MAIL ADDRESS OF THE COORDINATOR: | lukasz.bohdal@tu.koszalin.pl |
| COURSE TITLE: | Modeling of manufacturing processes |
| LECTURER’S NAME: | dr hab. inż. Łukasz Bohdal, prof. PK |
| E-MAIL ADDRESS OF THE LECTURER: | lukasz.bohdal@tu.koszalin.pl |
| ECTS POINTS FOR THE COURSE: | 3 ECTS |
| COURSE CODE (USOS): | 9 |
| ACADEMIC YEAR: | 2025/2026 |
| SEMESTER:  (W – winter, S – summer) | W |
| HOURS IN SEMESTER: | 15 + 30 |
| LEVEL OF THE COURSE:  (1st cycle, 2nd cycle, 3rd cycle) | 1st cycle |
| TEACHING METHOD:  (lecture, laboratory, group tutorials, seminar, other-what type?) | Lecture + laboratory |
| 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 scope of the course includes the following topics:  Basic concepts related to the modeling of manufacturing processes. Mathematical and physical modeling of manufacturing processes. The concept of incremental description. Methods of solving equations of motion of continuous and discrete objects. Simulation of chosen manufacturing processes (for example: cutting, burnishing, blanking, guillotining, deep drawing, grinding) using FEM and CAE software. Application of meshfree methods in modeling of manufacturing processes. Analysis of physical phenomena during the processes and quality of final product in the aspect of energy savings etc. |
| ADDITIONAL INFORMATION: |  |

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