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| FACULTY: | Department of Mechanical Engineering |
| FIELD OF STUDY: | Mechanics and Machine Building |
| ERASMUS COORDINATOR OF THE  FACULTY: | Dr hab. inż. Agnieszka Kułakowska, Prof. PK |
| E-MAIL ADDRESS OF THE  COORDINATOR: | Dr hab. inż. Agnieszka Kułakowska, Prof. PK |
| COURSE TITLE: | Material strength |
| LECTURER’S NAME: | Dr hab. inż. Agnieszka Kułakowska, Prof. PK |
| E-MAIL ADDRESS OF THE LECTURER: | [agnieszka.kulakowska@tu.koszalin.pl](mailto:agnieszka.kulakowska@tu.koszalin.pl) |
| COURSE CODE (USOS): | 7 |
| ECTS POINTS FOR THE COURSE: | 4 ECTS |
| ACADEMIC YEAR: | 2023/2024 |
| SEMESTER:  (W – winter, S – summer) | W |
| HOURS IN SEMESTER: | 30+30 |
| LEVEL OF THE COURSE:  (1st cycle, 2nd cycle, 3rd cycle) | 1st cycle |
| TEACHING METHOD:  (lecture, laboratory, group tutorials, seminar, other-what type?) | Lecture, practice |
| LANGUAGE OF INSTRUCTION: | English, Polish, (separate group with English as leading language depends from the incomings number) |
| ASSESSMENT METOD:  (written exam, oral exam, class test, written  reports, project work, presentation, continuous assessment, other – what type?) | Written exam |
| COURSE CONTENT: | Determination of stress and strains- Hooke's law. Quantitative analysis of straight bars statically determinate and statically indeterminate in tension and compression. Analysis of bending a straight bar. Determination of stresses in a bending bar. Determination of stresses in the beams. Bending diagonal beams. The graphs of bending moments, shear forces and normal stress determination within the framework of statically determinate. Basic concepts and determine the strength of materials. The concept of strain - strain of pure volume, purely amorphous. Elements of the theory of elasticity of the elastic properties of the material, the strength properties of the material. Hooke's law for simple stretching. Tension and compression of straight bars. Bending simple beams. Pure bending of simple beams with the participation of shear forces. Torsion bars. Analysis of  stress and strain. Complex strength. |
| ADDITIONAL INFORMATION: |  |

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