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| FACULTY: | **Faculty of Mechanical and Energy Engineering** |
| FIELD OF STUDY: | **Mechatronics** |
| ERASMUS COORDINATOR OF THE FACULTY: | Igor Maciejewski, DSc, PhD |
| E-MAIL ADDRESS OF THE COORDINATOR: | igor.maciejewski@tu.koszalin.pl |
| COURSE TITLE: | **Relational database management systems** |
| LECTURER’S NAME: | Andrzej Błażejewski, Eng. PhD |
| E-MAIL ADDRESS OF THE LECTURER: | andrzej.blazejewski@tu.koszalin.pl |
| ECTS POINTS FOR THE COURSE: | 3 |
| ACADEMIC YEAR: | 2024/2025 |
| SEMESTER: (W – winter, S – summer) | S |
| HOURS IN SEMESTER: | 15h+15h=30h |
| LEVEL OF THE COURSE:  (1st cycle, 2nd cycle, 3rd cycle) | 1st cycle |
| TEACHING METHOD:  (lecture, laboratory, group tutorials, seminar, other-what type?) | Lectures (15h), 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?) | written exam + project work |
| COURSE CONTENT: | The lectures will provide the basic information and functions of the Relational Database Management Systems (RDBMS) in contrast to other database management systems (DBMS) and alternate forms of data storage.  The students will recognize the relational model of RDBMS, which stores information in a set of tables (relations), which consist of sets of tuples, each of which has a unique identifier or "primary key". The tables in RDBMS are then related to one another using "foreign keys". The basic information of the relational algebra will also be presented during the lectures. The students will get to how to "normalize" the database when designing a relational database, using different degrees of normalization. Relational databases will be normalized to the "third normal form", which means that the attributes in each table should "depend on the key, the whole key and nothing but the key".  The laboratories will allow the students to get to know special system software that is used to manage the organization, storage, access, security and integrity of data. The specialized software allows application systems to focus on the user interface, data validation and screen navigation. There is a possibility to introduce MS Access or/and MS SQL Server as the application of RDBMS. |
| ADDITIONAL INFORMATION: | Code 0921>1400-SZRBD |