

COURSE DESCRIPTION

THE HIGHER VOCATIONAL STATE SCHOOL IN WLOCLAWEK

Course: DATABASES

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|---|---|----------------|-------------------|--------------------|------------------|-----------------|---------------------|
| Field of study: | Computer science | | | | | | Course code: |
| Unit supervising the course: | Instytut Nauk Społecznych i Technicznych, Zakład Informatyki | | | | | | |
| Course orientation: | Practical | | | | | | |
| Language of instruction: | English | | | | | | |
| Course type: | Directional | | | | | | |
| Course status: | Mandatory | | | | | | |
| Level: I | Year: I | | | Semester: I | | | |
| The number of teaching hours on the full-time programme: | | | | | | | |
| Total | lecture | classes | laboratory | projects | tutorials | seminars | practicum |
| 30 | 15 | - | 15 | - | - | - | - |
| The number of teaching hours on the part-time programme: | | | | | | | |
| Total | lecture | classes | laboratory | projects | tutorials | seminars | practicum |
| - | - | - | - | - | - | - | - |
| Learning outcomes: | Knowledge: <ul style="list-style-type: none">the student has an elementary knowledge of the functioning of a database management system,understand the logical structure of the database in accordance with the requirements of the user,has knowledge of tools and enabling technologies to analyze the database structure using different data models. | | | | | | |
| | Skills: <ul style="list-style-type: none">can independently acquire knowledge and develop professional skills using a variety of sources and methods,has the skills to apply the knowledge gained to design the logical structure of the database,can formulate queries using relational algebra operators, and language. | | | | | | |
| | Social competence: <ul style="list-style-type: none">understands the need for professional skills due to technical progress,is aware of the role and place of databases in practiceis able to meet the demands posed in front of the candidates to the profession in this regard. | | | | | | |
| Full description of the course: | Lecture: <ul style="list-style-type: none">Information systems,Databases - basic concepts,Architecture database management system, | | | | | | |

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| | <ul style="list-style-type: none"> • Data models, • Relational databases, • Relationship algebra, • SQL - data manipulation language, • Entity relationship model, • Functional dependencies and normalization of relations, • Concurrent operations on databases. <p>Laboratory:</p> <ul style="list-style-type: none"> • Students work independently on your own project system. • Groups have to perform a system divided into several modules. • Students build a model of the system, and another partially implement it in their preferred tool and prepare the documentation of the system. | | | | |
| Methods: | <p>Lecture: The lecture and multimedia presentation.</p> <p>Laboratory: Laboratory exercises.</p> | | | | |
| The student's workload/ ECTS credits: | Forms of activities | Average number of hours to complete activities | | | |
| | | Full-time | | Part-time | |
| | Lecture | Classes | Lecture | Classes | |
| Contact hours with academic instructor | 39 | 39 | - | - | |
| Hours without academic instructor | 36 | 36 | - | - | |
| 1. Preparation for the classes, including reading assignments | 15 | 15 | - | - | |
| 2. Processing the quantitative data /preparation for the exam, evaluation tests, etc. | 15 | 15 | - | - | |
| 3. Preparation of a report, presentation, discussion | 6 | 6 | - | - | |
| Total | 75 | 75 | - | - | |
| Total number of ECTS for the conducted form of classes | 3 | 3 | - | - | |
| Total number of ECTS points for the entire course | 6 | | - | | |
| The type and mode of obtaining the credit and marking criteria or requirements: | <p>The type:</p> <ul style="list-style-type: none"> • Lecture – exam • Laboratory - credit rating. <p>The mode:</p> <ul style="list-style-type: none"> • Lecture - test, • Laboratory – 3 excercises. | | | | |

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| | <p>Basic assessment criteria:</p> <ul style="list-style-type: none"> • Lecture – test exam. • Laboratory – realization of scheduled laboratory exercises for at least a satisfactory grade. |
| <p>Literature:</p> | <p>Prescribed reading: Kuznetsov A., "Defensive Database Programming with SQL Server", Red Gate Books, 2010 Date C. J., "Database Design and Relational Theory", O'reilly Vlg. Gmbh&Co., 2012 Churcher C., "Beginning Database Design: From Novice to Professional", Springer Verlag Gmbh, Apress, 2012</p> <p>Recommended reading: Begg C., Connolly T., Holowczak R., "Business Database Systems", Pearson Longman, 2009 Navathe S. B., Elmasri R., "Database Systems", Prentice Hall, 2013</p> |
| <p>Course instructor: mgr inż. Marcin Kacprowicz</p> | |