Title:	**Databases**
Lecture hours:	30 lectures + 30 labs
Study period: (summer/winter)	Summer or winter
Number of credits:	6
Assessment methods:	Traditional form of lectures will be supported by video presentations of the most essentials and crucial steps to understand.
Language of instruction:	English
Prerequisites:	Basic knowledge of operating systems, algebra, programming languages
Course content:	The course program contains the following subjects: introduction to database systems, database systems architecture, life cycle of the database system, data modeling, entity-relationship diagrams, transformation of the conceptual database schema to implementation schema, relational data model, relational algebra, relational calculus, SQL language, normalization of the database schema, logical database schema design, data organizations, basic physical data structures.
Learning outcomes:	Students should obtain knowledge of basic notions and concepts of the database technology which are necessary for correct design, implementation and use of database systems and database applications. The students learn the fundamentals of database modeling and design, the relational data model, the standard SQL database language, the process of logical schema normalization, and the issues concerning logical database organization as well as the basic physical structures utilized in database systems.
Name of lecturer:	Dr Krzysztof Tyburek
Contact (email address):	krzysiekkt@ukw.edu.pl
Literature:	R. Elmasri, S. B. Navathe, Fundamentals of Database Systems, 6rd edition, Addison-Wesley, 2011 H. Garcia-Molina, J. Ullman, J. Widom, Database Systems: The Complete Book, 2nd edition, 2008 S. Abiteboul, R. Hull, V. Vianu, Foundations of Databases, 2010