Poznan University of Technology
Faculty of Electrical Engineering

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Title		Code
(Integracja i eksploracja danych)		**1010332421010330687**

Field		Year / Semester
Computer Science		**1 / 2**

Specialty		Course
-		**core**

Hours		Number of credits
Lectures: **2** Classes: **-** Laboratory: **1** Projects / seminars: **1**		**6**
		Language
		polish

Lecturer:

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Status of the course in the study program:

Obligatory course, Faculty of Electrical Engineering, field of Informatics.

Assumptions and objectives of the course:

This course aims to give an understanding of basic concepts of data integration in data warehouses, data mining techniques and statistical analysis of data.

Contents of the course (course description):

OLTP vs OLAP technologies in data processing. Data integration in data warehouses (DW). Data modeling for DW: star and snowflake schemas vs normalized schemas. Multidimensional modeling: data cubes, dimensions, measures, aggregation functions. The ETL process. MDX language: multidimensional expressions and their applications. Data mining primitives, languages and system architecture. Data mining algorithms: classification and prediction using decision trees and Bayesian classification. Mining association rules. Text mining techniques. Cluster analysis. DMX in data mining. Selected methods of statistical analysis.

Introductory courses and the required pre-knowledge:

Databases, foundations of information theory and probability theory. SQL and programming in the .NET platform.

Courses form and teaching methods:

Lectures illustrated with slides, laboratory work. Projects with application of data mining techniques and statistical analysis.

Form and terms of complete the course - requirements and assessment methods:

Examinations, exercises and projects. Creation of data warehouses, multidimensional operations using MDX, data mining algorithms and MDX language, tools and methods for statistical analysis.

Basic Bibliography:

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Additional Bibliography:

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