

Big data. Data Engineering (in english)

Forma studiów: Niestacjonarne

Sposób realizacji studiów: Online

GDYNIA 2 semestry OD MARCA

Program studiów

Postgraduate Program on Big data. Data Engineering



Liczba miesięcy nauki: **9**



Liczba godzin: **192**



Liczba zjazdów: **10**



Liczba semestrów: **2**

DATA ANALYSIS WITH R (18 godz.)

Base R and RStudio development environment: data import from different sources, data preparation for analysis, data cleaning, data wrangling, plots creation with ggplot2 and plotly, reporting with markdowns (18 h)

DATABASE SYSTEMS. SQL BASICS (MICROSOFT SQL SERVER) (24 godz.)

ERD diagrams, Normalization, SQL DDL, SQL DML (24 h)

DATA ANALYSIS WITH PYTHON (24 godz.)

Basic syntax of Python and introduction to Pandas and Numpy libraries. Data import from different sources, data preparation for analysis, data cleaning, data wrangling, plots creation (matplotlib, plotly). Report preparation with jupyter notebooks (24 h)

OBJECT ORIENTED PROGRAMMING IN PYTHON (12 godz.)

Class variables, Class Methods, Static Methods, Inheritance (12 h)

DATA ANALYSIS IN JAVA (32 godz.)

- Basic concepts of object-oriented programming, development environment and tools, what is data analysis, data science vs. data analysis, why Java, data structures - Java Collections Framework, ETL - Extract, Transform, Load processes (16 h)
- Integration with relational databases, data processing with functional programming (16 h)

APACHE KAFKA (6 godz.)

Quick introduction to event streaming and processing with Apache Kafka (6 h)

NOSQL (MICROSOFT AZURE) (20 godz.)

Basic concepts of NoSQL Databases - HBase, Cassandra, Impala, Neo4j (20 h)

ADVANCED SQL CONCEPTS AND DATA WAREHOUSING (24 godz.)

Advanced SQL concepts - SQL/TSQL; Data Warehouse; ETL/ELT; Power BI (24 h)

BIG DATA TOOLS (MICROSOFT AZURE (24 godz.)

Apache Hadoop & Apache Spark (24 h)

PROJECT (8 godz.)

Seminar (8 h)

Form of crediting the studies:

semester tests and project defense

<https://www.merito.pl/gdynia/studia-i-szkolenia/studia-podyplomowe/kierunki/big-data-data-engineering-english>