

# Python - Introduction to ETL

Course code: PYTHON\_ETL

ETL stands for Extract-Transform-Load - database functions that are integrated into one tool that extracts data from one database and places it in another database. Extract is the process of reading data from a database. Transform is the process of converting the acquired data from its original form to the form in which it is expected to be placed in another database. Load is the process of writing data to the target database. ETL is used to migrate data from one database to another to create data markets (DataMart) and data warehouses (DataWarehouse) and also to convert a database from one format or type to another. The course is intended for every adept but also for an experienced data engineer who is interested in using the Python programming language for data acquisition, processing and preparation in the future. The training is conducted extremely intensively, with practical examples from the real world, and therefore knowledge of the Python programming language is recommended at least at intermediate and higher level (PYTHON\_INTRO and PYTHON\_ADV) and also at least at intermediate level knowledge of relational databases.

Affiliate	Duration	Course price	ITB
Praha	5	26 500 Kč	50
Brno	5	26 500 Kč	50
Bratislava	5	1 150 €	50

The prices are without VAT.

## Course terms

Date	Duration	Course price	Type	Course language	Location
10.03.2025	5	26 500 Kč	Online	CZ/SK	GOPAS Praha online
10.03.2025	5	1 150 €	Online	CZ/SK	GOPAS Bratislava prezenčne

The prices are without VAT.

## Requirements per participant

- Knowledge of Python programming at the PYTHON\_INTRO and PYTHON\_ADV course level

## Teaching methods

- Expert explanation with practical examples, exercises on computers.

## Study materials

- Online presentation of the subject matter and exercises.

## Course syllabus

- Introduction (Python, ETL, Data Engineering)
- Data sources (CSV, JSON, RESTApi, MySQL, Postgresql, Oracle 12c, NoSQL)
- Data targets (WareHouse, DataMart)
- Pandas
- ETLAlchemy
- Bonobo
- Luigi
- Airflow
- Talend
- Distributed systems (SQOOP, PIG and SPARK / Impala vs Presto /, HIVE)
- Conclusion

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