Data is ubiquitous in modern economy. From flight test data to financial reports, from web-based content to scientific computation results, sources of data are heterogeneous, flow at different speeds and vary in volume. The first step in an efficient data-driven business model is the definition of a strong data integration framework, able to cover all the useful data sources, to manage them over time, to report on data quality and to efficiently explore and visualize their contents.

**Prerequisites**
- General knowledge on computer science.
- Work experience in a professional environment.

**Learning objectives**
After completing this course, participants will be able to:
- Explain the key components of ETL-based data warehousing;
- Set up indicators on data quality and management;
- Perform a simple data visualization task.

**Key elements**
- Dates: November 21 to 24, 2022
- Duration: 28 hours, 4 days
- For whom: recent graduates, jobseekers and experienced employees
- Location: ISAE-SUPAERO, Toulouse
- Course fees: €2,300
- Language: English

**Practical information and registration**
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Course Content
Data Warehousing:
- History and recent evolutions
- Extract-Transform-Load process
- Architecture
- Key functions
- Layers
Data quality:
- Indicators
- improvement
- assurance
- control
Data visualisation:
- visual perception
- effective graphical display
- tools

Teaching methods

<table>
<thead>
<tr>
<th>Teaching methods</th>
<th>Yes</th>
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</thead>
<tbody>
<tr>
<td>Lectures / tutorial</td>
<td>X</td>
</tr>
<tr>
<td>Collaborative learning</td>
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<tr>
<td>Flipped classroom</td>
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<td>Blended learning (online and face to face)</td>
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<tr>
<td>Learning by doing</td>
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<tr>
<td>Project-based</td>
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<tr>
<td>Simulation</td>
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<tr>
<td>Case study</td>
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Assessment
- Case study (50 %)
- Hands-on evaluation on a computer (50 %)