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.

**Highlights**

- Data warehousing and visualisation
- Data quality management
- Practical courses

**Key elements**

- **Period:** November
- **Estimated duration:** 35 hours, 4 days
- **For whom:** recent graduates, jobseekers and experienced employees
- **Location:** ISAE-SUPAERO, Toulouse
- **Language:** English

**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>
<td></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 %)