

Methods and Tools for BI

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Prerequisite: II.1101 / II.1201 Data Bases and Web Technologies

Organization: Lectures + Exercices + Labs + Projects

Evaluation: Written examination + Projects

ECTS : 5 credits

Context

In a competitive and evolving context, an organization must constantly oversee all aspects of its business and master its entire business environment. For this, it is necessary to consolidate the internal data from the various IT systems of the company and data from external sources. Business Intelligence provides the tools to centralize data and improve managers' strategic decision-making.

Objectives

The course is based on strategic analysis, information technology, statistics, data warehouses to access external and internal data sources, and then analyzes them to produce information in order to guide strategic decision-making.

The teachings given in this module allow elaborating of the following concepts and know-how.

- **Concepts**
 - Decision process
 - Business Intelligence
 - Data warehouse
 - Data mart
 - OLAP or Data cubes
 - Data Quality Management
 - ETL: Extract transform and Load
 - Reporting

- **Know-how**
 - Implement the key elements of a decision chain
 - Apply a BI meta-model that turns results into action
 - Extract and transform data from an operational database to a data warehouse.

- Know the new agile business intelligence tools
- Understand the implementation methodologies specific to these new tools and integrate them into the current decision-making information system,
- Develop new dashboard projects with these tools.

Pedagogical Approach

Each week will be organized in the following way: a lecture or a lab. A team management project for the implementation of a decision-making project will be proposed. A second final implementation project for the construction of a data warehouse and its operation will also assess the skills acquired.