**Information Systems**

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COURSE AIMS AND INTENDED LEARNING OUTCOMES

The course is designed to provide the basic concepts related to Information Systems, with reference to relational databases. The data and information management systems will be analyzed, the role in the management and organization of the company together with technical knowledge of the technologies and applications supporting information management in the specific context of the plan called "Impresa 4.0". It will also be provided basic concepts on Cloud Computing primarily when implemented in the Company organization processes. The study of Information Systems is not limited to technical knowledge but must be integrated with elements of organization, process, and data management. Laboratory hours are foreseen, during which a specific competence will be given to using spreadsheets.

At the end of the course, the student will be able to:

* Introduce the basic principles of Information Systems
* Present the fundamentals of the integrated management applications and the principles on which the Integrated Factory is founded together with the knowledge of the "Impresa 4.0" Plan and the related technologies
* Understand the different aspects concerning the introduction and use of ICT in an organization
* Understand the types, uses and impacts of Cloud Computing based systems in the company organization context
* Read and design a relational database
* Use spreadsheet features for data processing and analysis.
* Use Microsoft Office 365 applications for organizations and workgroup

Course contents

The course content is organized as it follows:

* The data and information resources
* The Information System: components, organization, and processes
* Location and layers of Information System
* Cloud Computing approach in the company organization
* Basic Security concepts applied in the use of Company applications with references to laws and regulations
* Integrated Management Systems and Factory Integrated Systems
* Concepts related to the “Impresa 4.0” plan and the integrated factory
* DBMS and Relational Database design
* Data analysis using Spreadsheet

READING LIST

The titles of the advised textbooks will be communicated during the course.

In addition will also be the materials provided by the teacher during the course and uploaded in Blackboard, from time to time.

Teaching method

Lectures and class exercises in the computer room.

ASSESSMENT METHOD AND CRITERIA

The exam is aiming to assess skills and learning of the topics covered during the course.

The exam is a written test.

The exam is based on 7 questions:

* 1 open question (giving 4 points)
* 3 marked questions (giving 8 points)
* DataBase logical design exercise (giving 8 points)
* Spreadsheet practical exercise (giving 10 points)

NOTES AND PREREQUISITES

The course does not require prerequisites related to the contents.

To fill the IT gap, a special course is prepared at the beginning of the first year.

OFFICE HOURS FOR STUDENTS

Information on office hours available on the teacher's personal page at <http://docenti.unicatt.it/>