UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Information Systems

2425-3-E4101B025

Learning objectives

The course aims to create the necessary knowledge, under the technical and methodological point of view, to enable a correct approach to the design of an information system, as a key strategic resource to achieve the goals of a business organization.

Knowledge and understanding

This course will provide knowledge and understanding in relation to:

- Design of information systems for data analysis and decision support
- Identification of data sources of an enterprise information system
- Management of structured and unstructured data

Ability to apply knowledge and understanding

At the end of the course the students will be able to:

- Use software for analyzing structured and unstructured data
- Use software for representing data
- Interpret data analysis results to support decision-making

The course allows the student to acquire a solid foundation on the theory of information systems and in the application of knowledge management and data analysis techniques to be used in the biostatistic / statistical / demographic context.

Contents

- Application architectures and technological architectures of information systems
- Digital applications and analysis of information system
- Design of information system for data analysis and decision support system
- Information systems and social media

Detailed program

Application architectures and technological architectures of information systems:

- Database management processes
- Distributed architectures, client server, network, Internet and World Wide Web
  Digital applications and analysis of information system:
- The application portfolio in the industrial and service companies
- CRM
  Design of information system for data analysis and decision support system:
- Design of processes and data modelling
- BPR
- Activities and information analysis
  Information systems and social media:
- Evolution of enterprise information systems

Prerequisites

Fairly good skills in learning, writing and speaking are expected, together with a general knowledge about the main technologies and applications of Computer Science. Knowledge of the Office package.

Teaching methods

The course is delivered in Italian and includes classroom lectures and laboratory exercises.
The lectures cover 6 CFU of the course.
In the lectures, the theoretical topics inherent to the course are illustrated (delivery mode), and students are assigned project work to carry out in groups and discuss by the end of the course (interactive mode).

In detail:

- 42 classroom hours in the first semester (6 CFU)
  - of which 30 in lecture mode and 12 in interactive mode, with presentation and discussion of group work.

Assessment methods

The verification method is based on a written test.

The written test takes place at the computer and it consists of 3 open (short essays) and 10 closed questions with multiple answers (TRUE/FALSE). Open questions aim to evaluate the reasoning and critical discussion skills of a topic. The closed questions aim to evaluate the preparation on all the topics of the course. Open questions have a greater weight in the calculation of the final grade.

The evaluation is focused on the student's ability to answer to specific questions by referring both to the theoretical and practical aspects (through examples) connected to the requested topic.

The test is common for both attending students and non-attending students.
There are no intermediate tests.
During the course, students are invited to carry out a project in a group, it is not mandatory, whoever completes it will have a few more points in the exam. Non-attending students can freely choose whether to carry out the project.

Textbooks and Reading Materials

1. G. Bracchi, C. Francalanci, G. Motta. Sistemi informativi d’impresa. McGraw-Hill, 2010.
2. V. Cosenza, "Social media ROI", Apogeo, 2012, ebook available on internet, chapters: 1, 2, 4, 5 (the basic concepts).
   Further material (slides and papers on specific topics) is available on the elearning page of the course.

Semester

The course is delivered in the second cycle of the first semester.

Teaching language

Italian

Sustainable Development Goals

INDUSTRY, INNOVATION AND INFRASTRUCTURE