UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Metodi Informatici per la Gestione Aziendale

1920-3-E3101Q131

Aims

The course aims at providing the student with the following professional skills:

- analysis of the main tasks in the organization and management of a company
- reading and interpretation of a company balance sheet
- main marketing data analytics techniques
- analysis of specific problems with development of analytical data applications in R.

Contents

The course is divided into four modules:

1. Micro economy

2. Organization and business management

3. Marketing analytics techniques

4. Analysis of specific problems in the marketing and development of applications in R

The main contents of the course are:

1. ***Micro economy***

2. ***Organization and business management***
     - Elements of economy and business organization
     - Financial statement
     - Business finance
3. ***Marketing analytics techniques***
4. ***Analysis of specific problems in the marketing and development of applications in R***
     - Business Intelligence (BI) and Data Modeling in the business environment
     - presentation and discussion of specific cases of marketing problems
     - analysis of the related datasets and development of solutions in R
5. Elements of project management
     - General concepts of project management
     - Project planning

Detailed program

1. Elements of microeconomics

2. Organization and business management
     - Financial statement
     - Corporate finance
3. Marketing analytics techniques

     - presentation and discussion of specific cases of marketing problems
     - introduction to the main machine learning techniques for marketing data analysis
     - Business Intelligence (BI) and Data Modeling in the business environment
     - Presentation of the main Adavanced Analytics platforms (also cloud based) available
4. Laboratory:

     - Introduction to R
     - Explorative / descriptive analysis of datasets
     - Application development of machine learning in R
5. Elements of project management

     - General concepts of project management
     - Project planning

Prerequisites

- Databases

- Probability and statistics for IT

- Software analysis and design

Teaching form

The training activity will be divided into:

- lectures: in which the topics of microeconomics and organization and business management will be presented
- tutorials and laboratories: in which marketing data analytics topics will be presented with specific applications with real data. These activities will be preparatory to the planning and development of the end-of-course project which, for example, may consist in the implementation of marketing analytics applications.

The course is *teached in Italian*.

Textbook and teaching resource

- Microeconomia. Ediz. custom Daniel L. Rubinfeld, Robert S. Pindyck, Pearson

- Economia e organizzazione aziendale, introduzione al governo delle imprese. Fabio Antoldi, MC Graw Hill

- R for Marketing Research and Analytics, Chapman, Christopher N., McDonnell Feit, Elea

- Slide realized by the teachers
- additional material eg

Semester

First semester

Assessment method

The exam will be organized as follow:

Oral exam:

- ***Traditional***: oral exam at the end of the course that focuses on the topics covered in class by the two teachers of the course.
  The oral exam regarding the topics of points 1-2 (microeconomics and business organization and management) will not be required for students who have passed the intermediate test.
- ***with Intermediate Check***: (mid-December): the test consists of a test with a set of questions (maximum 10) with open answers regarding the topics presented in points 1-2 (microeconomics and business organization and management). Each question will be associated with a score, from 3 to 5. The student can answer any number of questions. The evaluation of the partial will be expressed through a quali-quantitative judgment: Insufficient [<18], Sufficient [18-> 22], Good [23-> 26], Excellent [27-> 29], Top [> 30]

Laboratory Project in R:

- Implementation of an application in R for the analysis of marketing data.
- Written report
- Oral discussion of the project using a set of slides, with possible questions on the topics covered in the classroom on points 3-5.

Delivery times will be communicated on Moodle.

Office hours

The two instructors are available for meet students or immediately after the lectures or setting up a meeting anytime in office hours by email.