

## COURSE SYLLABUS

### **Business Statistics**

2425-2-F8204B008-F8204B012M

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#### **Learning objectives**

The analysis of business activities requires appropriate measurement tools that make it possible to highlight critical points and opportunities for development. The quantitative assessment of company performance makes it possible to deal more consciously with the various problems of internal management and interaction with the market, while the study of consumer behaviour is the starting point for the definition of companies' marketing strategies and for the optimal design of the marketing mix. Carrying out this type of evaluation implies the use of various tools belonging to statistics and in particular to economic statistics: from sample theory to the preliminary treatment of raw data, from regression models to structural equation models, from the conscious use of information sources to multivariate techniques of demand segmentation and supply positioning. The course aims to guide students in the choice and use of these tools, on the one hand by putting to use some of the statistical techniques learnt during their course of study and on the other hand by broadening the range of tools available with some of the most commonly used quantitative and qualitative techniques in market analysis. Through role-plays and testimonials, it will be shown how statistical methods enable some of the most critical business problems to be tackled and solved.

#### **Contents**

Preliminary Data Processing - Advanced  
Tools for advanced multivariate analysis  
Big Data  
Data Mining

#### **Detailed program**

Introduction to the course

Managing and interpreting Big Data  
Data Mining  
SIX SIGMA  
Privacy  
Predictions  
Samples  
Delphi  
Cybersecurity  
Role-playing

## **Prerequisites**

None. Knowledge of topics covered in courses on multivariate statistical analysis, sample theory and economic statistics is recommended.

## **Teaching methods**

Lectures, applications and role play.

## **Assessment methods**

The examination consists of a written test which is followed by an oral test. The final grade is given by the arithmetic mean of the two tests.

For the written test

Time: 30 minutes

It consists of closed questions , open questions and exercises for extensive checking of preparation on the examination program.

For questions with closed questions with marks given in parentheses (1/30) these marks are used positively in case of a correct answer and negatively in case of an incorrect answer, non-answer carries the value 0. The sum of the marks in parentheses is 32.

The test is considered passed only if a grade of 18/32 is achieved.

Only the examination paper complete with answers must be handed in, no other papers used must be handed in.

For the oral test

The examination starts from viewing the written test and aims to ascertain the candidate's preparation in the subject area through questions and exercises.

## **Textbooks and Reading Materials**

M.J.A. Berry, G.S. Linoff (2001), Data Mining, Apogeo.  
P. Mariani (2002), La statistica in azienda. Contesti ed applicazioni, FrancoAngeli.  
Further guidance is available on the lecturer's e-learning page

## **Semester**

Year of course 2 - Period I

## **Teaching language**

Italian

## **Sustainable Development Goals**

INDUSTRY, INNOVATION AND INFRASTRUCTURE

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