

# MANAGEMENT DIGITALE (LB46)

(Lecce - Università degli Studi)

## Insegnamento BUSINESS ANALYTICS

GenCod A005238

**Insegnamento** BUSINESS ANALYTICS

**Anno di corso** 3

**Insegnamento in inglese** BUSINESS ANALYTICS

**Lingua** INGLESE

**Settore disciplinare** SECS-S/06

**Percorso** ECONOMICO

**Corso di studi di riferimento** MANAGEMENT DIGITALE

**Docente** FABRIZIO DURANTE

**Tipo corso di studi** Laurea

**Sede** Lecce

**Crediti** 6.0

**Periodo** Secondo Semestre

**Ripartizione oraria** Ore Attività frontale: 36.0

**Tipo esame** Orale

**Per immatricolati nel** 2018/2019

**Valutazione** Voto Finale

**Erogato nel** 2020/2021

**Orario dell'insegnamento**

<https://easyroom.unisalento.it/Orario>

### BREVE DESCRIZIONE DEL CORSO

The course presents a vast set of machine learning tools for understanding and making prediction from the data. All the presented tools are illustrated in several real case studies with the software R.

### PREREQUISITI

Basic elements of calculus and statistics for data analysis

### OBIETTIVI FORMATIVI

Knowledge and understanding:

- Knowledge and understanding of machine learning models;
- Knowledge and understanding of quantitative tools for business, including segmentation and forecasting.

Applying knowledge and understanding:

- Ability to extract relevant information from big dataset for management and business innovation.
- Ability to identify the machine learning models that are suitable to analyse correctly a specific business problem.
- Ability to use a specific programming language to implement machine learning procedures.

Making judgments:

Making judgements on pros and cons of different machine learning tools.

Communication skills:

to present in a concise way the results of a quantitative analysis.

Learning skills:

Ability to formalize in an algorithmic form a problem of interest in business.

### METODI DIDATTICI

Frontal lectures, exercises, computer labs.

---

## MODALITA' D'ESAME

The written exam consists of several exercises and one or more review questions. The project work consists of the preparation of a quantitative analysis related to the contents of the course with the help of the software R.

To pass the exam students must obtain a positive evaluation on both the written exam and the project. Both parts weigh 50% of the total points.

Sample of the written exam will be available at the course webpage.

There is no difference in the assessment procedures between attending and non-attending students.

University of Salento "*promuove e garantisce l'inclusione e la partecipazione effettive degli studenti con disabilità*" (art. 10 of the Statute). Students that have a disability or impairment that requires accommodations (i.e., alternate testing, readers, note takers or interpreters) could contact the Disability and Accessibility Offices in Student Services: [paola.martino@unisalento.it](mailto:paola.martino@unisalento.it)

---

## APPELLI D'ESAME

see the webpage [economia.unisalento.it](http://economia.unisalento.it)

---

## ALTRE INFORMAZIONI UTILI

Starting with January 2021, more information will be available on the course webpage.

---

## PROGRAMMA ESTESO

Introduction to Machine Learning. Cross-Validation.

K-Nearest neighbour algorithms.

Linear Model. Regularization. Lasso.

Decision Trees.

Support Vector Machines.

Unsupervised learning. K-means algorithms. Clustering.

---

## TESTI DI RIFERIMENTO

Required reading:

John C. Hull: Machine Learning in Business – An introduction to the world of data science, 2019.

Suggested reading:

James, G., Witten, D., Hastie, T., Tibshirani, R.: An Introduction to Statistical Learning with Applications in R. Springer, 2013. Free available at <http://www-bcf.usc.edu/~gareth/ISL/>

Lectures notes will be provided.