

**Corso:** Applied Statistics

**Docente:** Secchi

**Semestre:** 1°

**Lingua di erogazione:** ENG

**N° max studenti ammessi:** 50 Polimi

**Modalità d'esame per non frequentanti:** scritto e orale.

**Note:** l'insegnamento è erogato presso altra Scuola.

Integrated Product Design/ Design del prodotto per l'innovazione	Design degli Interni- Interior Design	Design della Comunicazione	Design for the Fashion System	Product Service System Design	Design & Engineering
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## APPLIED STATISTICS

The course covers new approaches in the areas of statistical modeling and data analysis, using ideas that bridge the gap between statistics and computer science and developing tools for the statistical mining of big data. The focus is on predictive learning, with particular emphasis on recent advances in regression and classification.

Topics include: linear models; dimensionality reduction; supervised learning, regression and classification; unsupervised learning and clustering; assessing uncertainty through resampling methods. All methods will be illustrated using applications from marketing, finance, biology and other areas. The R free software environment for statistical computing and graphics will be extensively used and illustrated throughout the course and its lab sessions. Through the course, students are expected to work in team on a real data analysis project whose progress will be shown periodically to the class.

## APPLIED STATISTICS

### References:

- 1) James G., Witten D., Hastie T., Tibshirani R., (2013). An introduction to statistical learning, with application to R. Springer, New York  
<http://www-bcf.usc.edu/~gareth/ISL/index.html>
  - 2) Statistical Learning MOOC by Hastie and Tibshirani (2014)  
<http://www.r-bloggers.com/in-depth-introduction-to-machine-learning-in-15-hours-of-expert-videos/>
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