



DEPARTMENT	Economic, Business And Statistical Science (SEAS)
ACADEMIC YEAR	2021/2022
COURSE TITLE	Machine learning: basic concepts and applications
SSD	SECS01
SPEAKERS	Salvatore Fasola, Giovanna Cilluffo
TOTAL HOURS	12
COURSE DESCRIPTION	In this course, basic concepts and terminology of <i>machine learning</i> will be provided. In addition, some predictive modelling techniques for quantitative and/or categorical outcomes will be presented, with some applications on real data in R.
OBJECTIVES	At the end of the course, the students will be able to: 1) Know some basic machine learning techniques 2) Carry out applications of the aforementioned techniques in R
SUGGESTED BOOK	James, Gareth, et al. An introduction to statistical learning. Vol. 112. New York: springer, 2013.

LECTURES SCHEDULE

Hours	Topics
3	Machine learning: overview; elastic-net models: tuning parameter selection R applications (libraries: <i>glmnet</i> , <i>caret</i>)
3	Practical session
3	Random Forests R applications (libraries: <i>randomForest</i> , <i>caret</i>)
3	Practical session