## **Laboratory of Data Analytics for Banking and Insurance**

## Prof. Giampiero Remotti

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

The course aims to show through concrete cases the typical management cycle of analytical processes useful for responding to information and decision-making needs in some typical areas of the banking and insurance world.

At the end of the course, the student will be able to carry out the most suitable analytical processes to meet business needs using the main SAS tools and will have to be confident with the model realization cycle that is necessary to give concrete and functional answers.

Attention should also be put to visualization reports and deployment instruments that must be shared with the potential business colleagues interested in decisions and evaluations of the business opportunities that the analyzes will allow to highlight.

***COURSE CONTENT***

The main contents of the course concern:

- SAS tools for analytics and datamining management.

- Presentation of the main datamining models: regression, neural networks, support vector machine, decision tree.

- Model validation, assessment, deployment methodologies.

- Main graphical and result indicators like confusion matrix, ROC curve, cumulative response chart, lift chart

***READING LIST***

During the course, some materials useful for learning and consolidating the concepts presented will be made available and will contain additional bibliographic references that the student can use for further study.

***TEACHING METHOD***

The teaching method includes three parts for each topic: the first part is relative to the theoretical reference on which the analyzes are based, the second part will show, through concrete cases, how to develop the analytical models using the SAS environment. Finally, in the third part, the students will develop simple analytical models that will be shared.

***ASSESSMENT METHOD AND CRITERIA***

The evaluation will take place through a questionnaire with closed questions, both single and multiple, concerning the theoretical part and the application part. Some questions will regard the meaning of the options of the SAS tool used for the analyzes.

Through the answers the students should demonstrate both the knowledge of the theoretical aspects used by the analytical processes and the ability to use the tool.

***NOTES AND PREREQUISITES***

Before entering the course, the student should be familiar with the main notions about statistics and probability (like discrete and continuous distributions, mean, variance, significance test, etc.), regressive models and their interpretation, likelihood maximization and so on.