# Analytics Accounting

## Prof. Laura Mazzola

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

The course focuses on analytic techniques for decision-making and examination of big data involving accounting information. In this context, the course aims at providing students with an in-depth understanding of how collect, storage, and analyze both financial and non-financial data to address accounting-related problems. The course will also enable students to understand how big data and analytics affect accounting processes.

Intended learning outcomes students are expected to achieve before attending the course

On successful completion of the course, students are expected to be able to:

* Understand the use and nature of the accounting information
* Understand data analytics methods and apply appropriate methods to assess accounting-related problems.
* Employ adequate data analytics methods to analyse financial statements and understand implications of accounting policy and company performance.
* Apply data analytics techniques to analyse financial accounting, and audit datasets.
* Develop dynamic data analysis.
* Develop appropriate problem formulation for accounting data.
* Evaluate the business risks and ethical issues related to data collection, storage, and use.
* Critically discuss the findings of accounting analytics.

***COURSE CONTENT***

1. *Principles of accounting*

* The uses of accounting information
* The nature and function of accounting
* The preparation of the financial statements
* The accounting treatment of assets and liabilities
* Cash flow statements

1. *Financial statement analysis*

* Financial Statement Analysis: Introduction
* Understanding Income Statements and Balance Sheets
* Understanding Cash Flow Statements
* Financial analysis techniques: ratio analysis
* Financial and non-financial data

1. *Analytics in financial accounting*

* Source, storage and evaluation of accounting data
* Data mining for accounting
* Analytics in business and other accounting areas
* Issues in accounting analytics
* Problem formulation for accounting analytics

1. *Risk management analytics*

* Defining Risk, Risk Analytics and Risk Management
* Operational risk categorization, organizational modeling and frameworks
* Measurement of expected and unexpected losses

1. *Predictive analytics*

* Performance measurement
* Earnings forecast
* Computer Intelligence for Credit Scoring
* Fraud detection
* Interpretation and evaluation of results

***READING LIST***

Jerry J. Weygandt, Paul D. Kimmel, Donald E. Kieso, *Financial Accounting With International Financial Reporting Standards*, 4th Edition, Wiley.

Richardson, V., Teeter, R., & Terrell, K., *Data analytics for accounting*, McGraw Hill Education, 2019 (ISBN: 978-1260375190).

Slides and articles shown in class will be made available through the Blackboard platform.

***TEACHING METHOD***

The course consists of a cycle of lectures carried out with the aid of slides and other supporting material.

***ASSESSMENT METHOD AND CRITERIA***

The valuation mark is based on a final written exam, which is divided into two parts: the first part consists of several multiple-choice questions; the second part consists of an articulate open-ended question

Students will pass the test if the scores obtained are at least 18/30 in each of the two parts of the exam.

The oral exam may be: a) required by the students who have passed the final written test in case they feel that their preparation does not correspond to the outcomes of the exam; b) requested by the lecturer.

***NOTES AND PREREQUISITES***

Further information can be found on the lecturer's webpage at http://docenti.unicatt.it/web/searchByName.do?language=ENG or on the Faculty notice board.