Laurea / B.A.
in Global Governance

Academic Year 2026-2027
Syllabus
Big Data Analytics
CFU 6
Prof Simone Borra

Course Description
The course provides an introduction to data preparation, data analysis and report creation in SASVisual Analytics.
Students will learn how to use this point-and-click SAS environment to easily access, transformand modify data so that it's ready for analysis, and also how to visually explore data to discovernew insights. This Data Visualization tool by SAS enable students to easily search for relationships, trends and patterns to gain a deeper understanding of their data. Then create stunning reports and dashboards that are shareable via the web and mobile devices.
In addition, students can enrich reports with powerful statistical models.

Teaching Method
Classroom teaching: a SAS expert will describe the main topics of the course and will answer students' questions.
E-learning: a collection of videos, demos, and practices, that summarize the concepts shown in classroom.
Case studies: in which students can practice with the supervision of the teacher.

Schedule of Topics

Topic 1	Introduction to Big Data and Data preparation
Topic 2	Data Exploration; Association; Linear and nonlinear regression
Topic 3	Introduction to SAS Viya and Visual Analytics interface.
Topic 4	Loading, investigating and preparing data with SAS Visual Analytics.
Topic 5	Data analysis with Visual Analytics (descriptive statistics, distributions, correlations, linear regression).
Topic 6	Designing interactive reports with Visual Analytics: prompts, actions, rules and ranks.

Documentation:

- SAS Visual Analytics 1 for SAS Viya: Basics – PDF
- E-learning - SAS Visual Analytics 1 for SAS Viya: Basics

Assessment:
There will be two different parts for the evaluation:
First part, Project Work, that will include a team work to be finished in one day with a final presentation. The teamwork is based on a re-elaboration of an ugly report, that is not visually appealing, to be transformed in a report that is easy to read. You will be completely independent in the execution. The project work will attribute up to 4 points to be added to the final mark.
The groups can be decided by the students and must be made up of a minimum of 2 students up to a maximum of 4 for each group. It is mandatory to send the list of groups and their names. The Project Work will be online but it will not be a lesson. The groups of students will have to carry out the project work and present it at the end (power point is not necessary, they will present it directly from the software)

Second part, exam (date TBC): divided in two parts, one theoretical with questions to be answered with pure knowledge (with multiple choice questions, 1 h) and a practical part (with multiple choice and open answer questions, 1h), with action to be performed on the software to answer the questions. The theoretical questions are not related to the two introductory lessons of the prof. Borra, but they only refer to the use of SAS Visual Analytics.

For not attending students: the grade will be based only on the second part identical to the one for attending students.

Week	*hours*	*Teaching*
week1	*4*	*Prof Borra*
week2	*3.5*	*SAS*
week2	*5*	*e-learn*
week3	*3.5*	*SAS*
week3	*4*	*e-learn*
week4	*3*	*SAS*
week4	*8*	*e-learn*
week5	*7*	*SAS Case Study*
week5	*4*	*e-learn*
week6		*(exam)*

Office hours
On demand or in office – to be booked by e-mail
E-mail
borra@uniroma2.it

Certification
Lectures and e-learning lessons can help students prepare for the certification exam **SAS Certified Specialist: Visual Business Analyst**. To complete the preparation, the student will have to dedicatetime to carry out the elearning module: **SAS Visual Analytics 2 for SAS Viya: Advanced**, as well as to carry out further practical exercises. All certification details are described in:
https://www.sas.com/sas/training/scyp.html

NOTE: If you are an **Erasmus** or a **non-Global Governance** student who would like to attend one or more courses in the Global Governance programme, please be aware that, before enrolling in the course, you should have read the **code of conduct** and the procedural rules characterizing our programme. We assume that, if you enroll in the course, **you have read and accepted all Global Governance values and rules**. Notice that attendance is expected from the very first lesson and you need to attend at least 75% of the course to be considered an attending student..

Description of the methods and criteria for testing learning

The examination assesses the student's overall preparation, ability to integrate the knowledge of the different parts of the program, consequentiality of reasoning, analytical ability and clarity of presentation, in accordance with the Dublin descriptors (1. knowledge and understanding; 2. applying knowledge and understanding; 3. making judgements; 4. learning skills; 5. communication skills).

The examination will be graded according to the following criteria:

Unsuitable: important deficiencies and/or inaccuracies in the knowledge and understanding of the topics; the topics are exposed in an incoherent manner and with inappropriate language.

18-20: barely sufficient knowledge and understanding of most of the topics, with some missing items; sufficient capacity for analysis; the topics are sometimes exposed in an inconsistent manner and with inappropriate/technical language;

21-23: basic knowledge and understanding of most of the topics; ability to analyze and synthesize correctly with sufficiently coherent logical argumentation, with possibly some inaccuracy in the technical language.

24-26: good knowledge and understanding of most of the topics; good analytical and synthetic skills with rigorously expressed arguments, though with possibly a few inaccuracies in the technical language.

27-29: complete knowledge and understanding of the topics; good capacity for analysis and synthesis. Arguments presented in a rigorous manner and with appropriate/technical language, with only minor inaccuracies.

30-30L: very good level of knowledge and thorough understanding of topics. Excellent analytical and synthetic skills and independent judgement. Arguments expressed in an original manner and in appropriate technical language.