



**JOIN US FOR AN ERASMUS+
BLENDED INTENSIVE PROGRAM IN**

DISCRETE EVENT SIMULATION

Organized by the Università del Piemonte Orientale, in the fascinating atmosphere of the historical Villa San Remigio on the Lago Maggiore in collaboration with the TU Iasi, Université Sorbonne Paris Nord, Universidad de Zaragoza.



WHY

- Earn 4 ECTS
- International and interdisciplinary learning experience
- Rich virtual environment for on-line classes and activities
- Hands on experience using open source software
- Collaborative project work in teams
- Team building activities
- Visit some beautiful sites around the Lago Maggiore



WHEN & WHERE

On-line part of the course: Mid-March to Mid-June 2025

Residential part of the course: 30/6 – 4/7/2025 in Verbania, Italy. Courses are held in the historical Villa San Remigio. Accommodation: "Al Centro", Verbania.



**Universidad
Zaragoza**



WHAT WILL YOU LEARN?

The course provides **motivation for performing simulation studies**, illustrates the main concepts and methods for building simulation models, executing them and analysing the output. This is done through application examples and **hands-on exercises using open source simulation environments**. The basic background notions on probability and statistics needed to perform the analysis of the simulation output are reviewed in the course.

At the end of the course you will be able to:

- Define the purpose of a simulation study and provide examples of possible applications.
- Conceive a simulation model chosen from an application domain of your interest and suitable for being executed by a discrete event simulator.
- Build a model using a modeling and simulation tool and execute it: this includes choosing the correct abstraction level, properly defining the model parameters (possibly from measured input data) and the performance indicators of interest.
- Observe the random nature of some input parameters and the consequences on the output measures; realize the need to perform multiple executions of the simulation model and to apply statistical analysis to the output data obtained from the executions.
- Apply all the above abilities to a realistic case study. Perform what-if analysis to observe and explain how the simulation results change when considering variations of the model (different configurations or parameter values).

In the **final project work**, started on-line and fully developed during the residential part of the course, you will face the challenge to finding an efficient configuration for an application case study of your interest **collaborating with your team**, and have the opportunity to discuss and compare your solution with that of other teams.

