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## QHelp: Higher Education Learning Platform for Quantitative Thinking

March 13<sup>th</sup> to March 20<sup>th</sup>, 2022  
(Hosted by KU Leuven; Coordinated by Tartu Ülikool)

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### General information

QHelp is a 3-year project co-funded by the Erasmus+ Program of the European Union. The project aims to improve quantitative thinking in our society and it includes yearly *blended mobility activities* (intensive seminars) organized and hosted within a consortium of 12 European universities under the coordination of the University of Tartu (Tartu Ülikool). These intensive seminars will bring together students and staff from the partner universities, using innovative learning and teaching methods. Participation will improve transversal and basic skills and competencies in quantitative thinking such as communication and presentation, research ethics, and programming skills. The working language is English.

### Website

<https://ghelp.eu/>

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## Erasmus seminar 2022

### Rationale and background

Understanding of, critically reflecting on, and communicating statistical information and quantitative concepts has become a fundamental skill and competence for informed and active citizens in a modern society. Not only in the society at large, but certainly in a research and development context quantitative thinking is at the basis. There is a continuing trend to develop sophisticated technologies for research and data analysis, and these advances are quickly changing how research is conducted in Psychology and the Social Sciences.

Consequently, quantitative thinking has a fundamental role in finding employment as a researcher but also in moving from academia to jobs in business and industries. The lack of quantitative competences and programming skills is seen as a major hurdle for students pursuing a higher degree in Psychology or Social Sciences, and for young graduates seeking employment in a competitive job market society.

This seminar pools resources and expertise from 12 European universities to create a unique program and provide an interdisciplinary platform for a successful interaction of Psychology, Mathematics, and Computer Science.

### Aim and approach

The main purpose of this seminar is to teach mathematical-logical and computational skills as well as communication competences to perform competitive research on classic and emerging topics in Psychology and Social Sciences.

Teaching will be based on a combination of lectures, exercises, and interactive activities supervised by several experts so that a student continuously receives personalized feedback.

### Seminar preparation and learning assessment

A list of 4-5 journal papers will be made available that participating students can read in advance, in preparation for the lectures that will take place during the seminar.



During the seminar sessions, besides attending lectures, participating students will team up to work on a small-scale project related to one of the topics of the seminar, for which they will develop a Shiny app and give a presentation at the end. Apps developed by students will be made publicly available at <https://qhelp.eu/>.

### Preliminary program

- Day 1. Programming in R and Shiny + Ethics in research
- Day 2. Introduction to knowledge structures
- Day 3. Data analysis in psychophysics + Epidemiological modeling
- Day 4. Tools for teaching statistics
- Day 5. Work on student projects
- Day 6. Presentation of student projects

### Venue and dates

In 2022 the seminar is planned to be held in Leuven (Belgium) between **March 13<sup>th</sup>** (arrival date) and **March 20<sup>th</sup>** (departure date). Accommodation for all participants will be provided at *De Blauwput* youth hostel (<https://www.jeugdherbergen.be/en/leuven>). The teaching will take place in university rooms.

Due to the COVID-19 pandemic, the in-person seminar might be replaced with an online version if European countries enforce new measures and mobility restrictions apply (check <https://reopen.europa.eu/en> and <https://www.info-coronavirus.be/en/travels/>)

### Financial support

The seminar is partially funded by the European Commission (Erasmus + program). Teaching and full-board accommodation will be provided by the organization at no cost. In addition, up to 75% of the actual (and demonstrable) travel costs may be refunded to participants after the seminar. Social activities and other expenses are not covered.

### Eligibility

Eligible students must be nationals of a European Union Country (or have a valid visa to study in Spain and to enter Belgium), and they must also be enrolled in an official degree at **Universidad Complutense**.

Successful applicants must be able to follow lectures in **English** and capable to take part in the group discussions in English. Programming skills (especially in R) are highly desirable.

### Vacancies and application

There are four vacancies. If you are eligible and interested in applying, please send your CV along with a brief motivation letter to Rocío Alcalá-Quintana at [ralcala@psi.ucm.es](mailto:ralcala@psi.ucm.es). The application deadline is **December 10<sup>th</sup>**, 2021.

### Contact

Should you have any questions, please contact Rocío Alcalá-Quintana at [ralcala@psi.ucm.es](mailto:ralcala@psi.ucm.es).