

YELC 6303

Working with data for higher education professionals

Course Information:

Facilitators: [Dr. Pusa Năstase](#), [Agnes Benedek](#), and [Anna Galacz](#)

Dates: February 1, 2024; February 8, 2024; March 7, 2024; March 14, 2024; April 11, 2024

Times: 2:30 - 4:30 pm, Vienna time (Central European Time)

Format: Online

N.B. This course can be taken as a 1 US credit course or a non-credit workshop

Short description:

Data literacy has become a much-needed skill in higher education. It is a skill that can be applied to understand a variety of problems practitioners face, from analyzing student engagement to course evaluations to overall institutional performance. This course introduces university staff and managers without prior data training to the basics of working with data in higher education.

The course is structured in two interconnected parts, enabling participants to either take the whole course and complete the individual project for credit - or to take just the first two days as a foundational, standalone workshop, without course credit.

Accordingly, the first part consists of two introductory sessions providing an overview of different uses of organizational data, data management and collection techniques, regulations, analytical tools and methods. The second part consists of three sessions delving into data visualization, interpretation, and management, as well as individual projects, with an opportunity for personalized feedback on working with data in participants' specific contexts.

Learning outcomes:

By the end of the course participants will be able to:

- Understand the types of data collected in higher education institutions and its purposes
- Become aware of data protection (GDPR regulations, if applicable) requirements
- Choose and use appropriate data collection and analysis methods for the selected purposes
- Choose and use appropriate visualisation tools for the data to be presented
- Understand basic issues linked to data organization and integrity

Assessment

The course assessment is pass/fail.

The achievement of learning outcomes will be evaluated through a final project. Students can choose to focus on a concrete data-related problem they encountered in their work or on a project assigned by the course faculty (working with a dummy set of data).

The course instructors are available for individual consultations and will provide individual feedback to participants' final project.

No credit is given for those who do not attend most sessions and satisfactorily complete the project.

Sessions and topics:

Session 1: Introduction to Research and Data Analytics. Basics of Research Data Collection (Thursday, February 1, from 14.30 Vienna time)

- Importance of research and data analytics in HE
- Real-world example of successful data-driven decision-making in higher education: IRO at CEU
- Data collection methods (DBs, surveys, interviews, focus group, observations, external data etc.) and tools
- Importance of reliable and valid data. Reliable external data.
- Ethical considerations and privacy (GDPR)
- Examples of dealing with GDPR, discussion, best practices.

Session 2: Data Analysis Fundamentals (Thursday, February 8, from 14.30 Vienna time)

- Introduction to common statistical concepts (mean, median, standard deviation, etc.)
- Common analytical tools (Excel, SPSS, etc.)
- Pivots and the most useful functions
- Hands-on exercises using basic statistical software/tools

Session 3: Introduction to Data Visualization (Thursday, March 7 from 14.30 Vienna time)

- Importance of data visualization in conveying information
- Types of data visualizations (charts, graphs, dashboards)
- Hands-on practice with data visualization tools

Session 4: Introduction to Data Interpretation and Reporting (Thursday, March 14, from 14.30 Vienna time)

- Writing research reports and summaries
- Communicating results effectively to different audiences
- Examples of successful research communication in higher education

Session 5: Data Management (Thursday, April 11 from 14.30 Vienna time)

- Introduction to data management principles
- Data organization, storage, and retrieval
- Data cleaning and preprocessing techniques
- Best practices for maintaining data integrity