# DEVELOPMENT OF A VISUALIZATION AND ANALYTICAL METHOD OF THE PHARMACY CURRICULUM AT THE UNIVERSITY OF PÉCS, HUNGARY

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## Objectives
Logical arrangement of the pharmacy curriculum is essential for the effective educational process. We aim to collect and summarize prerequisites of obligatory subjects, data on student dropout rate, and integrate all relevant information in a visual map. Such decision support and quality management tool will help the Faculty management and subject directors to further develop our curriculum and optimize prerequisite subject structure.

## Methods
Prerequisites of obligatory subjects were exported to various software aiming to visualize the networks of our curriculum. Dropout rates were collected from the electronic administration system (Neptun).

## Results
A curricular system can be considered as a graph containing nodes (subjects) and edges (prerequisites). Our 10 semester one-tier master curriculum is highly complex, as the 70 obligatory subjects have more than 110 prerequisites. Visualization in MS Project as a Gantt chart makes visual interpretation difficult. Network analysis and visualization software (eg.: Gephi), was also an inadequate tool to visualize the timeline of education. Key subject specific components (credit value, subject code, semester, module, prerequisites, etc.) and educational properties (e.g.: failure rate, students’ feedback on education) have been identified, and are planned to be integrated into our methodology.

## Conclusion
A network analysis and visual presentation of the required subjects of pharmacy curriculum require an individual software developed to meet our expectations and needs. Applying such novel method will likely improve curriculum structure and reduce dropout rate by identifying critical subjects with high number of prerequisites and high failure rate.

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The project has been supported by the European Union, co-financed by the European Social Fund. EFOP-3.4.3.-16-2016-00005