

Tárgy neve: Spatial-social data sources

Tárgyfelelős neve: Dr. Jakobi Ákos

Tárgyfelelős tudományos fokozata: PhD

Tárgyfelelős MAB szerinti akkreditációs státusza: AT

Az oktatás célja:

a, knowledge

- Complex knowledge of the general geographical, cartographic, planning, mathematical and informatic principles, rules, relationships required for the practice of geoinformatics, especially in the following topics: geographical and spatial data collection at various scales; use of cartographic processes; knowledge of geographical and spatial processes; collection, editing and analysis of spatial data; remote sensing, photogrammetry, geostatistics, modelling, visualization, and geoinformatics system building.

- Comprehensive knowledge and understanding of the key relationships and concepts in the field of geoinformatics, in particular in the following areas: geolocation data collection technologies, 2- and 3-dimensional geoinformatics modelling, geovisualization, spatial data infrastructures, geoinformatics programming and application development, vector and raster geoinformatics, digital image processing, web-based geoinformatics solutions, geoinformatics databases, applied geoinformatics systems.

- Comprehensive knowledge of the problem-solving principles, methodology and processes of the planning, development and operation processes of the geoinformatics field

b, abilities

- Ability to interpret complex professional problems in the field of geoinformatics, to explore the necessary theoretical and practical background and to solve problems.

- Ability to interpret geographical/spatial phenomena, processes and information, and to plan, organize, manage and control processes in the field of geoinformatics.

- Ability to collect data independently and organize spatial data into a database, as well as to organize the data with the tools of geoinformatics. Ability to perform operations and models with independently organized databases.

c, attitude

- Committed to environmentally conscious behaviour in his/her field and laboratory activities.

- Monitors professional and technological developments in the field of geoinformatics and the labour market trends.

- Committed to adhering to and making others adhere to quality requirements.

- Open to professional cooperation with professionals working in related fields.

d, autonomy and responsibility

- Independence regarding the thorough examination and elaboration of professional issues and processes.

Az oktatás tartalma: The course introduces the access, use and correct interpretation of socio-economic territorial databases available in electronic forms, which can also be used for GIS visualisation and analysis. The course deals with the spatial resolution of different socio-economic phenomena and with the related public or commercially available statistical data sources. Students learn how to fit data needs to the existing regional statistical databases. Students also learn to avoid misinterpretations arising from the method of statistical enumeration, and as a result to create content-adequate GIS outputs. Detailed topics in the context of spatial-social data: data addition, data replacement, homogenisation and aggregation of spatial and time series, elimination of bias due to changes in administrative positions, management of the “headquarters problem” in geolocalization, management of the effects of data protection restrictions, data estimation options. Examples of spatial-social databases to be introduced: HCSO databases, TEIR, international data sources: OECD, Eurostat, UN, ITU.

A számonkérés és értékelés rendszere: practical course mark based on course work.

Kötelező irodalom:

- Anselin, L. (1992) Spatial Data Analysis with GIS: An Introduction to Application in the Social Sciences. National Center for Geographic Information and Analysis, University of California, Santa Barbara, CA, USA.

- Eurostat (2021) Statistical regions in the European Union and partner countries — NUTS and statistical regions 2021., DOI: 10.2785/850262
- HCSO (2020) Hungarian Statistical Review, Volume 3, Number 2.

Ajánlott irodalom:

- GDPR.eu, Horizon 2020 Programme of the European Union (2020) What is GDPR, the EU's new data protection law? <https://gdpr.eu/what-is-gdpr/>
- OECD (2019) Regional Outlook 2019. Leveraging Megatrends for Cities and Rural Areas. <https://doi.org/10.1787/9789264312838-en>