

Tárgy neve: Geostatistics - Geomathematics

Tárgyfelelős neve: Kovács József

Tárgyfelelős tudományos fokozata: DSc

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;

- Spatial and temporal data analysis; data management

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 initiate cooperation with design and development professionals and end users of geoinformatics results.

c, attitude

- Accepts and adheres to the ethical principles of work and organizational culture, especially with regard to the copyright related to geoinformatics.

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

d, autonomy and responsibility

d) autonomy and responsibility:

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

- Feels responsible for meeting and making others meet the deadlines. He/she is responsible for his/her work and for his/her co-workers' work in projects.

- With his/her knowledge and skills of geoinformatics, he/she cooperates responsibly with professionals in other fields.

Az oktatás tartalma: The aim of the course is to familiarise the student with the best known and most commonly used methods of geostatistics and geomathematics.

Variogram studies and kriging. Computations with the most important exploratory multivariate data analysis methods: cluster, discriminant and principal component and factor analysis. Basics of time series analysis: smoothing, decomposition methods, trend and periodicity. Basics of spectral analysis.

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

Kötelező irodalom:

- MCBRIDE, Graham B. Using statistical methods for water quality management: issues, problems and solutions. John Wiley & Sons, 2005., ISBN: 9780471470168
- ROGERSON, Peter. Statistical methods for geography. Sage, 2014., ISBN: 9781446295731
- MCCARROLL, Danny: Simple Statistical Tests for Geography, Taylor & Francis, 2016, ISBN 9781498758819

Ajánlott irodalom:

- DAVIS, John C.; SAMPSON, Robert J. Statistics and data analysis in geology. New York: Wiley, 2002., ISBN: 9780471172758
- ROGERSON, Peter. Spatial Statistical Methods for Geography, Sage Publications, 2021, ISBN 9781529707458
- ACEVEDO Miguel F.: Data Analysis and Statistics for Geography, Environmental Science, and Engineering, Taylor & Francis, 2019, ISBN 9780367866792