

Tárgy neve: Cartographic elements in geoinformatics

Tárgyfelelős neve: Dr. Zentai László

Tárgyfelelős tudományos fokozata: DSc

Tárgyfelelős MAB szerinti akkreditációs státusza: AT

Az oktatás célja:

a, knowledge

- Familiar with the general cartographic and IT principles and rules necessary for the operation of geoinformatics;
- Knowledge of the specific tools of the geoinformatics discipline, the cartographic elements of field survey procedures, data management and analysis, effective cartographic representation in a geoinformatics environment;
- Knowledge and use of spatial data collection technologies, their cartographic aspects and key elements.

b, abilities

- Ability to select the most effective cartographic tools and software to solve a given task, depending on the complexity of the task;
- Ability to systematically process, evaluate, interpret and analyse the results of measurements and to support the drawing of conclusions from these results in cartographic terms, and to visualize them in an optimal way;
- Ability with the acquired cartographic knowledge to carry out effective, user-oriented planning, development and consultancy tasks in the operation of GIS, decision support systems and expert systems.

c, attitude

- Shares his/her knowledge, considers it important to communicate the results of cartography.
- 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.
- 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 main aim of this course is to deliver the basic cartographic and IT elements and knowledge for the MSc students of geoinformatics. The primary task of geoinformatics is the analysis of spatial data, decision preparation and decision support. One of the most important tools for this is the map, the cartographic representation, the optimal data visualization. For the effective application of geoinformatics tools and software, for the proper visualization of our data, it is essential that students have a thorough knowledge of cartography, which can be well applied in any software environment, in any field of geoinformatics.

The primary goal of the course is to acquire the cartographic approach, to apply the most important, most effective elements of cartography in an IT, but mainly geoinformatics environment. The course facilitates the preparation to deal with cartographic problems that arise during the design, development, implementation and operation of geoinformatics systems. We lay emphasis on the development of cartographic skills in the theoretical and scientific problems of geoinformatics, and on the preparation for scientific research.

A számonkérés és értékelés rendszere: oral and/or written exam.

Kötelező irodalom:

- Kraak, MJ–Ormeling, F.: Cartography, Visualization of Spatial Data, Fourth edition, CRC Group, 2021, 261 p., ISBN 9781138613959
- Field, K.: Cartography, ESRI Press, 2018, 576 p., ISBN: 9781589484399
- United Nations: Mapping for a Sustainable World, United Nations, 2020, DOI: <https://doi.org/10.18356/9789216040468c001>

Ajánlott irodalom:

- Del Lima, M.: Handbook of Cartography, Callisto Reference, 2015, 326 p., ISBN 1632393778
- Cynthia Brewer: Designing Better Maps, 250 p., ESRI Press, 2015, ISBN: 9781589484405
- Gretchen N. Peterson : Cartographer's Toolkit: Colors, Typography, Patterns, PetersonGIS, 2012. 184 p.; ISBN 9780615467948