

Course title: GIS ANALYSIS

ECTS credit allocation (and other scores): 2,5

Semester: spring

Level of study: ISCED-7 - second-cycle programmes (EQF-7)

Branch of science: Engineering and technology

Language: English

Number of hours per semester: 45

Course coordinator/ Department and e-mail: Marek Ogryzek, Ph.D., Institute of Geography and Land Management, marek.ogryzek@uwm.edu.pl

Type of classes: classes and lectures

Substantive content

CLASSES: Spatial analyzes - application of thematic layers, buffering (proximity analysis), classification, network analysis, generalization (change of scale), three-dimensional analyzes, application of graph theory in GIS analysis, vector and raster data model, TIN model, geostatistic models, data sources for systems geographic information, digitization, topology, coding

LECTURES: Network analysis, generalization, three-dimensional analyzes - numerical terrain model, acquisition of spatial data from field measurements, paper maps, aerial and satellite images, operations on raster data, visualization of results.

Learning purpose: To develop the skills of spatial data analysis. Particular attention was paid to the modeling of spatial analyzes and differences between the raster model and the vector model.

On completion of the study programme the graduate will gain:

Knowledge: Has extensive knowledge in the field of cartography, space analysis and visualization methods.

Skills: Processes, analyzes and visualizes spatial data in various ways.

Social Competencies: Is able to interact and work in a group, assuming different roles in it, is able to properly define the priorities for the implementation of specific tasks or tasks.

Basic literature: Smith, Goodchild, and Longley, Geospatial Analysis, Geospatial Analysis book online, 2015

Supplementary literature: Spatial analysis and GIS, S. Fotheringham, P. Rogerson, 2014

The allocated number of ECTS points consists of: 3

Contact hours with an academic teacher: 45

Student's independent work: 5