
Course title: IT STATISTICAL SYSTEMS

ECTS credit allocation (and other scores): 3

Semester: autumn

Level of study: ISCED-6 - first-cycle programmes (EQF-6)

Branch of science: Social sciences

Language: English

Number of hours per semester: 30

Course coordinator/ Department and e-mail: mgr inż. Mateusz Ciski/ Institute of Geography and Land Management;
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Type of classes: classes

Substantive content

CLASSES: Individual work on increasingly advanced problems in the field of data mining. Reading documentation of individual commands and packages. Development of a large task related to: data analysis, regression and conclusions based on calculated statistics.

LECTURES: Introduction to computational statistical packages - Statistica, S-plus, R. R console, syntax of the language R, the concept of "dataframe", structure and access to data. Basics of statistical calculations in R. Selected additional packages. Data visualization in a standard manner and using ggplot2. Connection of R with other programming languages.

Learning purpose: Familiarizing the student with object-oriented programming. Preparation for writing additional functions and plugins for GIS programs. Learning to acquire data from various sources.

On completion of the study programme the graduate will gain:

Knowledge: student has basic knowledge of statistical programming tools

Skills: student is able to analyze data using IT tools.

Social Competencies: student understands the need for further training in connection with the development of programming languages.

Basic literature: StatSoft Polska, Zastosowania statystyki i data mining w badaniach naukowych, wyd. Warszawa, 2017.

Supplementary literature: Yanchang Zhao, R and Data Mining: Examples and Case Studies, 2002.

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 2

Student's independent work: 1