Tárgy neve: Geography and data background of the information society

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
- Knowledge of the consequences of Industry 4.0-based operation and technological knowledge, cyber-physical systems, self-organizing mechanisms, and digitization and automation in the labour market inducing structural changes in production and supply chains, organization of production processes
- Knowledge of the principles, methodologies and procedures for the design, development and operation of geoinformatics processes in the field of Big Data - data mining
- Familiar with the possibilities, principles and problems of applying geoinformatics for public (e-government) and market purposes.
b, abilities
- Ability to interpret geographical/spatial phenomena, processes and information, and to plan, organize, manage and control processes in the field of geoinformatics.
- Ability to initiate cooperation, project work and team work with professionals in co-sciences and other related fields (geology, geography, geodesy, cartography, meteorology, environmental science, earth science, informatics, mathematics, statistics, archaeology).
- Ability to initiate cooperation with design and development professionals and end users of geoinformatics results.
- Ability to recognize and apply new problem-solving methods and procedures in his/her field and apply what he/she has learnt in a diverse, multidisciplinary environment.
- Ability to understand, plan and implement a quality management system for project-level tasks in the field of geoinformatics.
c, attitude
- 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.
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: Different concepts and interpretations of the information society. How does the information society influence data generation processes? Digital divide. Geographical differences in information society development, statistical measuring of regional inequalities. Concepts of the information economy and the challenges of industry 4.0. The "death of distance" theory, the relationship between location independence, location dependence and geoinformation. ICT strategies and tools for regional development. The social and geographical implications of the „big data" concept. Digital traces: direct spatial data (human sensing, mobile communication spatial data). Digital traces: indirect spatial data (transaction data, web usage spatial data). Digital traces: indirect spatial data (spatial components of social media data, online social networks). The concept of smart cities, the "data-driven city", and e-government in space. The phenomena of the "surveillance society" and the GDPR regulation. The concept of virtual space (cyberspace), relationships between virtuality and reality

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

Kötelező irodalom:

- Cairncross, Frances (1997) The death of distance. How the communication revolution will change our lives. Harvard Business School Press, Boston, USA.
- Jakobi, Ákos (2009) Diverse Approaches to the Importance of Geography: the Death of Geography or Geography Matters in the Information Age! In: Donert K, Ari Y, Attard M, O'Reilly G, Schmeinck D (ed.) Geographical Diversity. Berlin: Mensch und Buch Verlag, 2009. pp. 190-195.
- Karlsson, C. et al. (2010) ICT and Regional Economic Dynamics: A Literature Review. JRC Scientific and Technical Reports, European Commission, Joint Research Centre, Institute for Prospective Technological Studies, doi:10.2791/46419
- Graham, M. (2011) „Wiki Space: Palimpsests and the Politics of Exclusion". In: Geert Lovink and Nathaniel Tkacz (ed.): Critical Point of View: A Wikipedia Reader. Institute of Network Cultures, Amsterdam 2011, ISBN: 978-90-78146-13-1, pp. 269-282.
- Measuring the Information Society Report, International Telecommunication Union, 2017 ISBN: 9789261245115

Ajánlott irodalom:

- Jakobi, Ákos and Lengyel, Balázs (2015) Geovisualising unequal spatial distribution of online social network connections: a Hungarian example. In: Brus J, Vondrakova A, Vozenilek V (ed.) Modern Trends in Cartography, Springer International Publishing, Heidelberg - New York, pp. 227-240. (Lecture Notes in Geoinformation and Cartography) (ISBN:978-3-319-07925-7)
- Tóth, G ; Wachs, J ; Di Clemente, R ; Jakobi, Á ; Ságvári, B ; Kertész, J ; Lengyel, B (2021) Inequality is rising where social network segregation interacts with urban topology. NATURE COMMUNICATIONS 12 : 1 Paper: 1143 , DOI: 10.1038%2Fs41467-021-21465-0
- 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/