**Projectmanagement in geoinformatics**

**Purpose of education**

1. **Knowledge**

- The students have comprehensive knowledge in the field of spatial informatics developments. Their expertise includes handling spatial data, using programming languages, and possessing software development skills.

- Additionally, they are capable of designing, developing, and operating spatial informatics systems, applying spatial data technologies in an expert manner.

- The students are prepared for industrial applications, project management, and the innovative utilization of new technologies in the field of spatial informatics.

1. **Abilities**

* The students possess extensive knowledge in spatial informatics, including efficient handling and analysis of spatial data. Moreover, through their programming and software development skills, they are capable of designing and developing spatial informatics applications.
* Their project management abilities enable effective leadership of spatial informatics projects. Thanks to their knowledge in remote sensing and a systemic approach, they can integrate various systems and solve spatial informatics problems.
* They are capable of forming independent professional opinions and keeping track of the latest trends and innovations in spatial informatics.

1. **Attitude**

* The students have a proactive and creative approach, constantly seeking new opportunities and areas for development in the field of geoinformatics. Through their collaboration skills, they effectively work in teams, contributing to the success of projects.
* They handle project management responsibly, keeping in mind business value and industrial requirements. They are open to continuous improvement and professional development.
* Their attitude reflects ethical values, user-centered design, and innovation in building spatial informatics systems.

1. **Autonomy and responsiblity**

* The students operate independently and responsibly in their projects, autonomously planning and implementing spatial informatics applications. In the field of project management, they efficiently handle time and resources.
* Through effective communication and collaboration skills, they successfully work with other professionals. They take responsibility for data protection and ethical considerations while continually enhancing their professional knowledge by keeping up with the latest technologies.
* Through the autonomous management of projects, they contribute to the efficient and effective design of spatial informatics systems.

**Content of education**

Students acquire the principles of designing and developing geoinformatics systems, including system design methods. The course explores the use of remote sensing data, the principles of project management, and emphasizes data protection and ethical considerations. The goal of the education is to prepare students for the independent planning and implementation of spatial informatics projects, as well as keeping abreast of the latest trends and developments in the field.

Fundamentals of Spatial Informatics

Geoinformatic Systems and Technologies

Spatial Informatics System Building and Design

Design and Development of Spatial Informatics Applications

Data Protection and Ethics in Spatial Informatics

Project Management in Spatial Informatics

Innovation and Future Trends

Practical Project Work

**Evaluation system:** oral and/or written exam.

**Literature:**

**Obligatory:**

* Green, K., Congalton, R. G., & Tukman, M. (2017). Imagery and GIS: best practices for extracting information from imagery (Vol. 1). Redlands, CA: Esri Press. ISBN-13: ‎978-1589484542
* Dangermond, J., & Goodchild, M. F. (2020). Building geospatial infrastructure. *Geo-Spatial Information Science*, *23*(1), 1-9. Link: <https://www.tandfonline.com/doi/full/10.1080/10095020.2019.1698274>

**Recommended:**

* GIS Analysis and Design: https://www.e-education.psu.edu/geog468/node/1405
* Breunig, Martin, et al. "Geospatial data management research: Progress and future directions." *ISPRS International Journal of Geo-Information* 9.2 (2020): 95. Link: <https://www.mdpi.com/2220-9964/9/2/95>