COURSE DESCRIPTION

| University: | University of Prešov in Prešov | | | |
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| Faculty: | Faculty of Humanities and Natural Sciences | | | |
| Code: | Title: Introduction to Open Mapping | | | |
| 2GAG/EnIOM/20 | | | | |
| Field of study: 4.1.35. Geography | | | | |
| Study programme: Geography and Applied Geoinformatics | | | | |
| Guarantee: prof. Ing. Jozef Vilček, PhD. | | Lecturers: Mgr. Jana Michalková, PhD. | | |
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| Semester: | Forms of teaching: Number of credits | | Number of credits: | |
| | Seminars | | | |
| Summer | Recommended number of hours: 13 7 | | 7 | |
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Objective:

This course offers an engaging introduction to the world of open mapping, specifically focusing on the OpenStreetMap (OSM) ecosystem. Designed for beginners, the course will guide students through the fundamental aspects of mapping using the iD Editor, interpreting aerial imagery, and understanding the OpenStreetMap Data Model. Participants will also learn to use the Tasking Manager, a critical tool for coordinating collaborative mapping efforts.

By the end of this course, students will be able to:

- Understand the Importance of Open Mapping: Recognize the impact and significance of open mapping in various global contexts, including environmental monitoring, urban planning, and disaster response.
- Navigate the OpenStreetMap Ecosystem: Gain a comprehensive understanding of the OpenStreetMap (OSM) community, including the roles, contributions, and collaboration processes within it.
- Master the iD Editor: Acquire the skills to set up and use the iD Editor for creating and editing maps, starting with basic functions and progressing to more complex mapping tasks.
- Interpret Aerial and Satellite Imagery: Develop the ability to analyze and interpret different types of imagery, essential for accurate map making and data integration.
- Utilize the OpenStreetMap Data Model: Explore and understand the structure and components of the OSM data model, learning how to effectively utilize and contribute to this data.
- Operate the Tasking Manager: Learn to set up, select projects, and manage tasks within the Tasking Manager, understanding the dynamics of collaborative mapping projects.
- Apply Skills in Real-World Scenarios: Discuss and plan the application of mapping skills in real-world scenarios, enhancing readiness for practical challenges in geographical data handling and project management.
- Engage in Continuous Learning: Prepare for ongoing learning opportunities in open mapping, encouraging active participation and further skill development beyond the classroom.

Course content:

- 1. Introduction and Overview: Briefing on the importance and impact of open mapping. Introduction to the OpenStreetMap (OSM) ecosystem.
- 2. Deep dive into the OSM community: Roles, contributions, and collaborations.
- 3. The OSM Ecosystem: Overview of the infrastructure supporting OSM.
- 4. Introduction to the iD Editor: Setup and basic functions.
- 5. Mapping with iD Editor: Hands-on practice starting simple mapping tasks.
- 6. Fundamentals of aerial and satellite imagery analysis.
- 7. Imagery Interpretation: Practical exercises: interpreting different types of imagery for mapping.
- 8. The OpenStreetMap Data Model: Detailed exploration of the OSM data model and its components.

9. Practical activities: How to utilize and edit data within the OSM model.

10. Introduction to the Tasking Manager: Setup, projects, and task selection.

11. The Tasking Manager: Hands-on session - participating in a live project, understanding project management, and collaboration within the Tasking Manager.

12. Review of key concepts and skills learned.

13. Discussion on how to apply these skills in real-world scenarios and further learning opportunities. Q&A session, course feedback, and closure.

Literature:

- Solís, P., & Zeballos, M. (2023). Open Mapping towards Sustainable Development Goals: Voices of YouthMappers on Community Engaged Scholarship. Cham: Springer Nature.
- Solís, P., Anderson, J., & Rajagopalan, S. (2020). Open geospatial tools for humanitarian data creation, analysis, and learning through the global lens of YouthMappers. Journal of Geographical Systems. https://doi.org/10.1007/s10109-020-00339-x
- Štampach, R., Herman, L., Trojan, J., Tajovská, K., & Řezník, T. (2021). Humanitarian mapping as a contribution to achieving sustainable development goals: Research into the motivation of volunteers and the ideal setting of mapathons. Sustainability, 13(24), 13991. https://doi.org/10.3390/su132413991
- Michalková, J., & Michalko, M. (Eds.). (2023). Mapping Our World With Open Geospatial Tools: A Practical Guide for High School Teachers. University of Prešov, Prešov. https://euthmappers.gitbook.io/euthmappers-handbook/
- OSM. OpenStreetMap. Available at:: <u>https://www.openstreetmap.org/</u>.
- OpenStreetMap Wiki. Available at:: <u>https://wiki.openstreetmap.org/wiki/Main_Page</u>.
- TeachOSM. Available at: <u>https://tasks.teachosm.org/</u>

| Language the course is taught in: | Signature of guarantee and date of last edition: |
|-----------------------------------|--|
| English | April 2024 |