

## **Tárgytematika / Course Description** **Basics of surveying and water management**

**MENB\_VKTA073**

**Tárgyfelelős neve /**

**Teacher's name:** Dr. Vona Viktória Margit

**Félév / Semester:** 2024/25/1

**Beszámolási forma /**

**Assesment:** Vizsga

**Tárgy heti óraszám /**

**Teaching hours(week):** 1/2/0

**Tárgy féléves óraszám /**

**Teaching hours(sem.):** 0/0/0

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### **OKTATÁS CÉLJA / AIM OF THE COURSE**

The general aim of the course is to familiarise students with the knowledge of geodesy, which is necessary for their daily work and is a fundamental factor in the success of the land improvement processes in our agricultural areas, and to give an insight into the practice of the development and operation of geographical information systems.

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### **TANTÁRGY TARTALMA / DESCRIPTION**

Week 1 Subject and classification of surveying and geodesy.

Week 2 Horizontal plane measurements, horizontal angle measurement.

Week 3 Principle of leveling, the leveling point network.

Week 4 Map knowledge (map, scale, classification of maps), Hungarian projection systems, gauge network.

Week 5 Global positioning systems.

Week 6 Spatial models, spatial concepts. Use of raster and vector data models.

Week 7 Operational possibilities in geoinformatics.

Week 8 Distance and cost type studies.

Week 9 Functionality for further analysis of data, case studies.

Week 10 Remote sensing

Week 11 Classification of water courses, categorisation of natural water courses.

Week 12 Types of river valley, stage characteristics, estuary types.

Week 13 Geometric parameters of river basins, characterisation of river basins.

Week 14 Cross-section of watercourses, site geography, types of longitudinal sections

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### **SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESSMENT'S METHOD**

Signature requirement: attendance of at least 2/3 of the lectures and exercises during the semester

(based on the catalogue).

Examination: oral examination (oral examination in items, minimum 50% level of knowledge required).

Evaluation with merit marks: unsatisfactory -1, satisfactory -2, average -3, good -4, excellent -5.

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### **KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL**

Lecture material

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### **AJÁNLOTT IRODALOM / RECOMMENDED MATERIAL**

Shimon C. Anisfeld: Water Management 2024, ISBN:9781642830064