

## **Tárgytematika / Course Description** **Geographic information system**

**MENB\_BÉTA011**

**Tárgyfelelős neve /**

**Teacher's name:** Dr. Kulmány István Mihály

**Félév / Semester:** 2023/24/1

**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**

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### **TANTÁRGY TARTALMA / DESCRIPTION**

#### Module 1. Basic information

##### Introduction

What is the geographic information system? What does it use for in agriculture?

How can we collect data?

Global Positioning Systems (GPS) and their accuracies.

Coordinate systems (WGS84 – EOVS)

#### Module 2. General principles

What is the JPEG, PNG, TIF, SHP, KMZ, KML...etc.?

Setting up coordinate system

Setting up Basic topo' such as OSM.

Create points and polygons line, editing their attribute tables.

Add coordinate to points.

Add data from excel sheet to points

Create buffer zones

Join, merge and clip of zones

Create soil sampling plans (1ha – 3 ha)

Add central points to the layers, automatically

#### Module 3. Data processing

Use of georeferencer

Module 4. Other softwares

Google Earth

Mobile applications

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

Exam

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## **KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL**

Important links:

<https://www.mapsforeurope.org/access-data> (EuroDEM)

<https://lechnerkozpont.hu/oldal/magassagi-adatok>

<https://apps.sentinel-hub.com/eo-browser/>

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## **AJÁNLOTT IRODALOM / RECOMMENDED MATERIAL**