



Syllabus

Term: 2026/27/1 **Subject name:** Data Acquisition Methods **Subject code:** AFOLNS1-0201

Unit (Unit code) Institute of Geography and Earth Sciences (FOLDRAJZ)

Lecturer responsible for the course: KOVÁCS Dániel Márton

Requirement: Term mark

Classes per week : 0/2/0

Classes per term: 0/26/0

Purpose of education:

The main objective of the lesson is to provide a general overview on the classical field acquisition methods (theodolite, leveling and GPS usage). After the course the students will be able to: 1. Basic theoretical knowledge on field survey. 2. Different practical steps of field survey for spatial data collection and processing. 3. Aware on the limitation of the above mentioned methods (optical levelling instrument, theodolite, GPS). 4. Performing a project where different applications of the field surveying can be applied. Processing field data and summarizing into a report.

Contents:

The main focus of the course is to apply a practical spatial data collection project based on the previously listed acquisition methods. The field knowledge will be transferred into a specific report which summarizes the practical phase of the lesson in a previously defined project environment. This project task should be executed at the certain level. Main building blocks of the course are the following: 1) General GPS usage (point recording, area measurement, transect recording), 2) Theodolite usage, 3) Leveling (cross section recording), 4) Project documentation.

System of examining and valuation:

The method of evaluation is the following (weighing) : field exercises / practical skills evaluation and its reporting – 50% project report – 50% Grading policy: <50%: fail (1) 50-65%: D (2) 65-80%: C (3) 80-90%: B (4) 90% <: A (5)

Bibliography:

P.L.N. Raju, FUNDAMENTALS OF GPS, Indian Institute of Remote Sensing - <http://wamis.org/agm/pubs/agm8/Paper-7.pdf> FAO, TOPOGRAPHICAL SURVEYS - DIRECT LEVELLING, http://www.fao.org/fishery/static/FAO_Training/FAO_Training/General/x6707e/x6707e08.htm FAO, MEASURING HEIGHT DIFFERENCES - http://www.fao.org/fishery/static/FAO_Training/FAO_Training/General/x6707e/x6707e05.htm http://www.fao.org/fishery/static/FAO_Training/FAO_Training/General/x6707e/x6707e06.htm FAO, TOPOGRAPHICAL SURVEYS - PLAN SURVEYING http://www.fao.org/fishery/static/FAO_Training/FAO_Training/General/x6707e/x6707e07.htm FAO, MEASURING VERTICAL ANGLES AND SLOPES http://www.fao.org/fishery/static/FAO_Training/FAO_Training/General/x6707e/x6707e04.htm FAO, MEASURING HORIZONTAL ANGLES



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Bibliography:

http://www.fao.org/fishery/static/FAO_Training/FAO_Training/General/x6707e/x6707e03.htm

FAO, MEASURING HORIZONTAL DISTANCES

http://www.fao.org/fishery/static/FAO_Training/FAO_Training/General/x6707e/x6707e02.htm

FAO, GENERAL BACKGROUND

http://www.fao.org/fishery/static/FAO_Training/FAO_Training/General/x6707e/x6707e01.htm <http://www.fao.org>

Bibliography: