Tárgytematika / Course Description
Geodesy

EKNB_KETA052

Tárgyfelelős neve / Teacher's name: Hegyi Pál Balázs
Félév / Semester: 2024/25/2
Beszámolási forma / Assesment: Vizsga
Tárgy heti óraszáma / Teaching hours(week): 1/2/1
Tárgy féléves óraszáma / Teaching hours(sem.): 0/0/0

OKTATÁS CÉLJA / AIM OF THE COURSE

Geodesy surveys are necessary for planning and set-out tasks before and during construction.

This course provides an overview of the land surveying techniques and focuses on the angle measurements and leveling. The labs provide hands-on experience in conventional and modern surveying instruments. Students as a team will work on a surveying project.

Students will be able to choose the right method to solve different geodesy tasks and gain experience in surveying instruments. (Leveling instrument, Total station, GPS)

TANTÁRGY TARTALMA / DESCRIPTION

1. Geodesy definitions, general information
2. Coordinate systems, geodesy projections
3. Geodesy networks
4. Angle measurements and the use of the theodolite
5. Angle measurements calculations
6. High measurements: Trigonometry leveling
7. High measurements: Geometry leveling
8. Measurement errors
9. GNSS - Global Navigation Satellite System
10. Modern survey methods: Laser scanner (LIDAR)
11. Photogrammetry
12. Construction surveys

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'S METHOD

Marks are from 1 (worst) to 5 (best).

- 0-50%: 1
- 51-65%: 2
- 66-75%: 3
- 76-85%: 4
- 86-100%: 5

Points will be given for:

- Home assignments (50p)
- Written exam (50p)

100 points is total.

For taking the exam: 25 out of 50 points have to be gather during the semester.

Offered marks:

In case of with excellent mid-term performance, you can avoid the exam. For rich the offered mark: 50 out of 38 (76%) points have to be gather during the semester and lab.

KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

Charles D. Ghilani; Paul R. Wolf: Elementary Surveying

Teaching materials: SZE Learning system: https://szelearning.sze.hu/

AJÁNLOTT IRODALOM / RECOMMENDED MATERIAL