



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Surveying Measurements Training

Course

Field of study

Sustainable building engineering - SBE

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

1/2

Profile of study

general academic

Course offered in

english

Requirements

compulsory

Number of hours

Lecture

Laboratory classes

Other (e.g. online)

60

Tutorials

Projects/seminars

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

dr inż. Artur Plichta

Responsible for the course/lecturer:

Prerequisites

Basic knowledge on mathematics, geometry, trigonometry

Course objective

Fieldwork with geodetic surveying practices are known to develop in students the skills acquired during laboratory classes. This is done by consulting and implementation of practical actions clearly formulating surveying tasks. Linking the theme of fieldwork tasks include training in mastering the techniques of measurement, which is measured repeatedly length, angles, etc. determines the height differences. Entire job including the development is to develop the ability to work in a team and perform well let alone some of the tasks encountered in engineering practice .

Course-related learning outcomes

Knowledge

1. The student knows how to properly interpret the task of surveying, choose the equipment and perform them with the required accuracy.



Skills

1. Unable to correctly measure angles, distances and height differences, calculate the most probable value and assess the accuracy of the measurements.
2. Able to perform basic calculations directly surveying and using computer programs.
3. It can update the map essential directly and using CAD software

Social competences

1. Ability to work in a team on a designated task.
2. Students deepen their knowledge in the field of geodesy and verifies it in legal terms. -

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Continuous assessment of student involvement and contribution to the work done by measuring assembly. Control and checking the daily progress of fieldwork and chamber measuring units. Evaluation of the implementation of single practical tasks. Final evaluation of the implementation of the sampling surveying. Way of checking individual skills and score sets a leading of group practice.

Programme content

Implementation of the following tasks:

Task 1: Tacheometric measurement of the geodetic control network.

Task 2: Performing a situational-height measurement of a part of the site along with plotting a situation-height map in the scale of 1: 500.

Task 3: Measuring the height of the inaccessible point.

Task 4: Calculating the coordinates of point basing on the intersection of directions.

Task 5: Surveying the development of a construction project.

Teaching methods

Teaching methods: Observation, field measurement.

Bibliography

Basic

John Uren, Bill Price, Surveying for Engineers (5th Edition), ISBN 978-0230221574

Barry Kavanagh, Tom Mastin, Surveying: Principles and Applications (9th Edition). ISBN 978-0137009404

Łyszkowicz A., Łyszkowicz S., Surveying. Wyd. Politechniki Warszawskiej, ISBN 978-83-7207-876-6



Additional

Barry Kavanagh, Dianne Slattery Surveying: with construction applications (7th Edition). ISBN 978-0132766982

Hycner R., Dobrowolska-Wesołowska M., Geodesy, Surveying and Professional Ethics, Wyd. Gall, 2008

Wyczałek I., Mróczyńska M., Plichta A., Pomiary sytuacyjne w zastosowaniach inżynierskich. Wyd. PP, 2019

Wyczałek I., Plichta A., Mapa w zastosowaniach inżynierskich. Wyd. PP, 2020

Breakdown of average student's workload

	Hours	ECTS
Total workload	60	2,0
Classes requiring direct contact with the teacher	45	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹	25	1,0

¹ delete or add other activities as appropriate