

## SYLLABUS

**Name:** Surveying (BudAB>SI4SURVEY19)

**Name in Polish:**

**Name in English:** Surveying

### Information on course:

**Course offered by department:** Faculty of Civil Engineering  
**Course for department:** Silesian University of Technology

#### Default type of course examination report:

ZAL

#### Language:

English

#### Course homepage:

<https://platforma.polsl.pl/rb/>

#### Short description:

Course will introduce student to the theories and techniques for horizontal measurements with theodolites and exercises of basic works with maps together with their supplementing.

#### Description:

**LECTURES:** 15 hours

Reference surfaces. Coordinate systems on a basic maps (X, Y). Elements of the coordinate calculus. Situational measurements. Methods for the measurement and computation of distances and angles measurements. Calibration, adjustment and maintenance of geodetic instruments – theodolite.

**CLASSES:** 5 hours

Reading surveying documents created during measurement, Reading basic maps, calculations in a coordinate system "2000" – mainly pole method.

**LABORATORY:** 10 hours

Surveying instruments in practice – theodolite adjustments and maintenance. Measuring two types of angles: horizontal, vertical, measuring distances, making inventory of stair case/road, checking verticality of edges. Calculate coordinates of points (X,Y) in the coordinate system on basic maps. Finding the position of points based on results of measurement, drawing/complementation part of the basic map.

#### Bibliography:

[1] Anderson J., Mikhail E Surveying: Theory and Practise. WCB/McGRAW-HILL, New York, 1998.

[2] Assur V.L., Filatov A.M.: Practical Guide to Surveying. Mir Publishers Moscow 1998

[3] Hycner R., Dobrowolska-Wesołowska M.: Geodesy, surveying and professionals ethics. Wydawnictwo Gall, 2008.

#### Learning outcomes:

**KNOWLEDGE:**

- (1) Student knows basic geodesic-cartographical elaborations and ways of gaining of spatial datas - [directional effect K1A\_W03]
- (2) Students understands the nature and aim of geodesic works performed for needs for the building process - [directional effect K1A\_W03]

**SKILLS:**

- (3) Student can handle with geodesic-cartographical documentation - [directional effect K1A\_U07]
- (4) Students gets the knowledge required for realization of basic calculations and geodesic measurement which are necessary on the building site - [directional effect K1A\_U07]
- (5) Student are familiar with geodesic-cartographical law - [directional effect K1A\_U07].

#### Assessment methods and assessment criteria:

Prerequisites: No requirements.

#### CONDITIONS FOR PASSING THE COURSE:

- 1) Attendance at exercises and laboratories;
- 2) Making reports from the practical and laboratory part and passing them;
- 3) Passing the final test covering the lecture, practical and laboratory part.

#### FINAL ASSESSMENT:

100% (test)

The final grade for the course is the grade for the final test. The condition for issuing the final grade is passing all reports.

To have partial grades transferred, students should contact their instructor within the first two weeks of the semester.

The syllabus is effective from the summer semester of the 2025/2026 academic year, and its content is not subject to change during the semester.

#### Element of course groups in various terms:

Course group description	First term	Last term
<i>missing group description in English</i> (BudAB-S1-2019-sem4)	2020/2021-L	

#### Course credits in various terms:

<b>&lt;without a specific program&gt;</b>			
Type of credits	Number	First term	Last term
European Credit Transfer System (ECTS)	2	2020/2021-Z	