



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Surveying Measurements Training [S1|Środ2>PrG]

### Course

Field of study	Year/Semester
Environmental Engineering	1/2
Area of study (specialization)	Profile of study
–	general academic
Level of study	Course offered in
first-cycle	Polish
Form of study	Requirements
full-time	compulsory

### Number of hours

Lecture	Laboratory classes	Other (e.g. online)
0	0	80
Tutorials	Projects/seminars	
0	0	

### Number of credit points

3,00

### Coordinators

dr inż. Joanna Papis  
joanna.papis@put.poznan.pl

### Lecturers

### Prerequisites

Knowledge of analytic geometry, trigonometry and knowledge of the basic methods in the field of mathematical analysis. The knowledge gained in the classroom with surveying conducted in the semester preceding the practice of surveying. Ability to solve basic tasks in mathematics of geometry and trigonometry. Skills gained in the classroom with surveying conducted in the semester preceding the practice of surveying. Diligence and regularity in acquiring knowledge and skills.

### 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. Able 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. Persons conducting exercises - employees of the Department of Surveying: dr hab. inż. Ireneusz Wyczałek, dr inż. Artur Plichta, mgr inż. Hanna Lelonkiewicz-Rowińska, mgr inż. Joanna Papis, mgr inż. Michał Moczko, mgr Michał Wyczałek

### Programme content

Implementation of the selected tasks: Task 1: Development of a situation and altitude maps in scale 1: 1000 or 1: 500. Task 2: Surveying the development project of the collector and the demarcation of its axis in the field. Task 7: Determination of longitudinal decline in the water table and the average water velocity. Task 8: Develop cross-section of the river valley.

### Course topics

none

### Teaching methods

Observation, field measurement.

### Bibliography

Basic:

1. Przewodnik do ćwiczeń terenowych z geodezji - praca zbiorowa, Wydawnictwo Politechniki Poznańskiej 2008

Additional:

1. Geodezja - M. Wójcik, I. Wyczałek, Wydawnictwo Politechniki Poznańskiej 19972. Geodezja dla kierunków niegeodezyjnych - Stefan Przewłocki PWN, Warszawa 2002 3. Geodezja. Podręcznik dla studiów inżyniersko-budowlanych - M. Odlanicki-Poczobutt PPWK, Warszawa 1989

### Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,00
Classes requiring direct contact with the teacher	60	2,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	15	0,50