

Title <b>(Podstawy geodezji i kartografii)</b>	Code <b>1010134241010120403</b>
Field <b>Environmental Engineering Extramural First-cycle studies</b>	Year / Semester <b>2 / 4</b>
Specialty -	Course <b>core</b>
Hours Lectures: <b>3</b> Classes: <b>14</b> Laboratory: -    Projects / seminars: <b>14</b>	Number of credits <b>6</b>
	Language <b>polish</b>

**Lecturer:**

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**Status of the course in the study program:**

Basics on geodesy and cartography

**Assumptions and objectives of the course:**

Procurement of knowledge from the range of basics of geodesy and spatial information systems. Use of maps and other sources of three-dimensional spatial data, also ? photogrammetric data. Conquering basic skills concerning methods of surveying ? stock-taking and realization.

**Contents of the course (course description):**

Spatial information at engineering practice. Geodetic space, datums and coordinate systems, classification of surveying methods. The map as a source of spatial information. Classification of maps under criteria of their contents and scale. Methods of cartographic presentation. Spatial information systems. Engineering works as a function of spatial information. Value of properties as an attribute within terrain information system. A matter of general assessment of properties. Law and order of space.

Surveying methods at plane and height. Attendance of surveying instruments. Geodetic techniques of satellite navigation and laser scanning. Photogrammetric methods in collection and processing of spatial information. Aerial and satellite images for measuring and photo-interpretation purposes. Photomaps, ortophoto, vector and thematic maps. National geodetic and cartographic stock. Centers of geodetic and cartographic documentation. Base map. Elements of records of plots and buildings, all-time books, local plan of spatial development. Geodetic records of infrastructure. Units of agreeing upon of project documentation. Surveying realization measurements ? nets of control points, stacking out and attendance of structure, after-performance and check measurements.

**Introductory courses and the required pre-knowledge:**

Basics on analytical geometry, trigonometry and mathematical analysis.

**Courses form and teaching methods:**

Lectures illustrated by slides, tutorial and laboratory classes.

**Form and terms of complete the course - requirements and assessment methods:**

Written and oral examination, tests.

**Basic Bibliography:**

**Additional Bibliography:**