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Course title: ELEMENTS OF SOIL SCIENCE, AGRICULTURE, FORESTRY AND WATER MANAGEMENT

ECTS credit allocation (and other scores):4

Semester: autumn

Level of study: ISCED-6 - first-cycle programmes (EQF-6)

Branch of science: Engineering and technology

Language: English

Number of hours per semester: 15 h of lectures, 30 h of classes

Course coordinator/ Department and e-mail: Andrzej Morze, Institute of Geospatial Engineering and Real Estate, andrzej.morze@uwm.edu.pl

Type of classes: classes and lectures

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#### Substantive content

CLASSES: Recognition of main rocks, soils types and main geomorphological forms of the post-glacial landscape. Interpretation of content of soil-agricultural maps, forest soil habitat maps.

LECTURES: Geological structure of the earth's surface, with particular emphasis on the area of Poland. Discussion of the surface construction of Poland. Systematics of Polish soils. Polish soil landscape. Bonitation of agricultural areas of Poland. Cartography of soil and plant habitats in Poland (agricultural and forest).

Learning purpose: Acquiring the ability to distinguish the basic rocks that build the Polish surface cover (in the context of their morphogenesis), the ability to read geological maps, distinguish the basic soil units of Poland; learning the rules of soil classification of Poland; ability to determine the agricultural usefulness of soils; ability to read soil maps (soil-classification, soil-agricultural, forest habitat maps).

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On completion of the study programme the graduate will gain:

Knowledge: students have basic knowledge of soil construction, soil science, agriculture and forestry, environment protection, arranging the rural space (InzA\_W02+, InzA\_W03+, InzA\_W05+, T1A\_W04+, T1A\_W05+, T1A\_W08+, K1A\_W10+).

Skills: -Students use the information resource in soil science, environmental protection and spatial planning using this information in geodetic works (T1A\_U02+, T1A\_U05+, T1A\_U07+, GiK1A\_U10+).

Social Competencie: Students are aware of the importance and understands the non-technical aspects and effects of engineering activities, including its impact on the environment (InzA\_K01+, T1A\_K02++, T1A\_K03+, T1A\_K05+, GiK1A\_K07+, GiK1A\_K08+).

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Basic literature: R. Cymerman, PODSTAWY ROLNICTWA I WYCENA NIERUCHOMOŚCI ROLNYCH, wyd. Educaterra, 2017.

Supplementary literature:

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The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 45

Student's independent work: 45