BACHELOR 'S PROGRAMME
2ND YEAR OF STUDY, 1ST SEMESTER

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| COURSE TITLE | PEDOGEOGRAPHY |
| COURSE CODE | JG2302 |
| COURSE TYPE | full attendance/ tutorial |
| COURSE LEVEL | 1st cycle (bachelor's degree) |
| YEAR OF STUDY, SEMESTER | 2nd year of study, 1st semester |
| NUMBER OF ECTS CREDITS | 5 |
| NUMBER OF HOURS PER WEEK | 4 (2 lecture hours + 2 seminar hours) |
| NAME OF LECTURE HOLDER | Lecturer Ionut VASILINIUC |
| NAME OF SEMINAR HOLDER | Lecturer Ionut VASILINIUC |
| PREREQUISITES | Advanced level of English |

## A GENERAL AND COURSE-SPECIFIC COMPETENCES

General competences:

→ Acquiring the adequate professional and transversal competencies, according to the specific requirements of the subject and the qualifications listed in the National Index of Higher Education Qualifications (RNCIS) for Geography of Tourism

Course-specific competences:

→ Explain the variability of soil-forming factors (rock, landforms, climate etc.) on Earth and the way in which they contribute to soil formation

→ Define and explain, in correlation to the soil-forming factors, the processes that contribute to the formation of the soil profile

→ Describe soil components and argument soil properties. Understand soil functions and their role in the geosystem

## B LEARNING OUTCOMES

→ Classify soil types and understand the organization of soil classifications systems (SRTS 2012, WRB-SR 2007).
→ Describe soil characteristics at world level.
→ Identify the main types of soil horizons.
→ Recognize the main morphological properties of soil horizons (colour, structure, texture etc.).
→ Use the field tool kit and the Eijkelkamp set for soil sampling

## C LECTURE CONTENT

**Introductory notions** (history of soil science, soil as a system, research methods in pedology).
**Soil forming factors** (rock, landforms).
**Soil forming factors** (the hydric and biotic components).
**Soil forming factors** (anthropic influence, time and transport factors).
**Soil forming processes** (accumulations, losses).
**Soil forming processes** (mixture, translocation, and transformations).
**Soil components and their properties** (the solid component, the mineral component, soil texture).
**Soil components and their properties** (the liquid and gaseous components).
**Soil components and their properties** (organic matter, organisms, the role of soil fauna, humus and organic carbon).
**Chemical soil properties** (cationic exchange capacity, soil reaction).
**Systems of soil classification** (SRTS, 2012, WRB-SR, 2007)
**World soil resources**
**Soil resources of Romania**

## D RECOMMENDED READING FOR LECTURES

1. Secu C. V., Rusu C., 2007, *Geografia solurilor cu elemente de pedologie*, Edit. Univ. Al. I. Cuza, Iaşi, 287 p.
2. Secu C. V., Patriche C. V., 2007, *Solurile lumii. Clasificare, răspândire, caracteristici*, Edit. Terra Nostra, Iaşi, 317 p.
3. IUSS Working Group WRB, 2006, *World reference base for soil resources 2006.*World Soil Resources Reports No. 103, FAO, Rome.
4. Florea N., Munteanu I. şi colab, 2012, *Sistemul Român de Taxonomie a Solurilor*, Edit. Sitech, Craiova 206 p.

## E SEMINAR CONTENT

**Main soil horizons** (according to RSTS, 2012 - O, T, Am, Ao and Au horizons).
**Main soil horizons** (according to RSTS, 2012 - Elv, Ea, Es, Bv, Bt, Bs Bhs).

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| | **Main soil horizons** (according to RSTS, 2012 - C and R) **and association horizons** (Ame, Btna, sa, sc, na and ac)<br>**Association horizons** (G, W, Bzy), **special diagnostic horizons** (Aho) **and diagnostic parent materials**<br>**Soil colour**<br>**Soil structure**<br>**Soil neoformations and inclusions**<br>**Evaluation of soil texture and skeleton content**<br>**Plasticity, adesivity, pores, crusts**<br>**Soil water**<br>**The soil profile** (evaluating soil forming factors, separation of soil horizons, noting morphological indicators, soil sampling, soil profile sheet).<br>**Soil sampling and the analysis of the soil profile** (equipment and techniques, field activity).<br>**Soil sampling and the analysis of the soil profile** (equipment and techniques, field activity). |
| F | RECOMMENDED READING FOR SEMINARS |
| | 1. Rusu C. (1998) – Fizica, chimia și biologia solului. Ed. UAIC<br>2. Secu C.V., Patriche C. V. (2007) – *Solurile lumii. Clasificare, răspândire, caracteristici*. Ed. Terra Nostra, Iași<br>3. FAO, 2006, *Guidelines for soil description*, Fourth edition, FAO, Rome.<br>**4.** White Robert Edwin, 1997, *Principles and practice of soil science: the soil as a natural resource*, (cotă la BCU-Filiala de Geografie III-16.899).<br>5. Gerrard, J., 2000, *Fundamentals of Soil*, Routlege Fundamentals of Physical Geography, London.<br>6. Blume Hans-Peter et al. (2016). *Scheffer/Schachtschabel Soil Science*, Springer-Verlag Berlin Heidelberg<br>http://en.eijkelkamp.com/products/soil/soil-drilling-and-sampling/hand-auger-equipment/Auger-set-for-heterogeneous-soils.htm (operating instructions) |
| G | EDUCATION STYLE |
| LEARNING AND TEACHING METHODS | Lecture, didactic explanation, demonstration, systematic observation, problem solving |
| ASSESSMENT METHODS | Examination + Seminar Grades |
| LANGUAGE OF INSTRUCTION | English |