



ЦЕНТЪР ЗА ОБУЧЕНИЕ – БАН

1000 София
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Basic Information:

Course Title: Theory and methodology of geography and GIScience

Lecturer: prof. Stoyan Nedkov

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Total Teaching Hours: 30

Annotation (up to 150 words)

The main goal of the course is for doctoral students to gain a solid foundation for development as scientists in the field of geography and geoinformation science.

The lecture material is structured in three main modules: 1) Development of science and scientific thinking; 2) Philosophy of science; 3) Scientific foundations of geography and geoinformation science. The first module examines the foundations of science and scientific thinking, analytically traces the main periods in the development of science and presents the basic concepts of the philosophy of science that are related to the scientific areas under consideration. The second module examines the main propositions of the philosophy of science that are related to the theory and methodology of geographical science. The third module examines the main postulates in the theory and methodology of geographical science. The stages in its development from descriptive to exact science are traced and the paradigms that determine this development are examined. Then, the emergence and development of geoinformation science as an interdisciplinary direction between geography and informatics are examined.

Course content (brief description by topics or modules)

Module 1. Development of science and scientific thinking in geography and ecology

1. Foundations of science and scientific thinking
2. Development of scientific concepts and the emergence of science
3. Development of scientific thinking
4. Formation of modern science

Module 2. Philosophy of science

5. Foundations of the philosophy of science
6. Basic concepts in the philosophy of science
7. Philosophy of science and geography

Module 3. Scientific foundations of geography and geoinformation science

8. Geography as a science
9. Current state of the theory and methodology of geographical science
10. Geoinformation science

Teaching and assessment methods

In-person, online or mixed.

Exam in the form of solving a practical problem.



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Competencies acquired as a result of training (3–5 points)

Knowledge of what science is and how it differs from other approaches to explaining the world;
Knowledge of the basic elements of science and their importance for the development of the scientific process;
Every doctoral student should receive a solid foundation for development as a scientist;
Skills for clear formulation and work on fundamental scientific research;
Skills for clearer formulation of scientific problems and contributions in publications.

Literature:

- Popper, K.R. (1959) *The Logic of Scientific Discovery*. London: Routledge & Kegan Paul.
- Kuhn, T.S. (1962) *The Structure of Scientific Revolutions*. Chicago, IL: University of Chicago Press.
- Lakatos, I. (ed.) (1978) *The Methodology of Scientific Research Programmes: Philosophical Papers Volume 1*. Cambridge: Cambridge University Press.
- Feyerabend, P. (1975) *Against Method*. London: New Left Books.
- Hacking, I. (1983) *Representing and Intervening: Introductory Topics in the Philosophy of Natural Science*. Cambridge: Cambridge University Press.
- Harvey, D. (1973) *Social Justice and the City*. London: Edward Arnold.
- Massey, D. (1994) *Space, Place and Gender*. Cambridge: Polity Press.
- Tuan, Y.-F. (1977) *Space and Place: The Perspective of Experience*. Minneapolis, MN: University of Minnesota Press.
- Thrift, N. (2007) *Non-Representational Theory: Space, Politics, Affect*. London: Routledge.
- Soja, E.W. (1996) *Thirdspace: Journeys to Los Angeles and Other Real-and-Imagined Places*. Oxford: Blackwell.

Additional information (optional) (e.g., special requirements, laboratory equipment, prior knowledge)