Table S2.6.4. Form for the preparation of the course information sheets

Name of the subject: Methodology of science and research work

Code of the subject	Status of the subject	Semester	Number of ECTS credits	Class load
	Obligatory		10	

Study programme for which it is organized:
Doctoral studies in sustainable development, MARDS

Dependency by other subjects: None

Objectives of studying this subject:
The course aims to enable students to acquire knowledge and train them in the methodology of scientific work and research methods, ways to collect facts, presenting the scientific results and writing the scientific work.

Contents of the subject (teaching units, forms of students' individual work, forms of testing) presented per working weeks in the academic calendar:

Preparatory week	
I week	Philosophical, psychological, epistemological and ethical bases of scientific methodology.
II week	The concept and function of methodology. Methodology and scientific theory. Sources of methodological knowledge.
III week	Components of the methodology.
IV week	Characteristics of scientific-research activity. Principles of scientific cognition. Logic and logical thinking. Logical errors: general and particular. The process of learning and memorising.
V week	Means and methods of scientific research. Means of scientific research.
VI week	Research methods. Organization of scientific research. Gathering facts in the methodology of scientific work. General method, concept of methods and types of methods in the methodology of scientific-research work.
VII week	Techniques of scientific-research work.
VIII week	Scientific research design. Research project (plan). Stages of scientific-research work: source of research areas and topics; scientific informatics; study of existing literature; working hypothesis; goal of the work.
IX week	Colloquium.
X week	Scientific research technology. Data collection strategy. Planning and performing an experiment. Pilot study. Data analysis and processing.
XI week	Organization of collective scientific research.
XII week	Presentation of scientific results: oral presentation and poster presentation; Types of professional and scientific papers;
XIII week	Structure and writing of a scientific paper. Techniques of writing a scientific paper.
XIV week	Scientific journals and international databases.
XV week	Scientific criticism. Scientific ethics.

Methods of education:

- lectures
- exercises
- seminar papers
- consultations
- field work

Students' load

Weekly	In Semester

Students' obligations during the teaching:
Attendance at lectures is mandatory, as well as homework and colloquia.

Literature:

1. Alexander M. Novikov, Dmitry A. Novikov – Research Methodology: From Philosophy of Science to Research Design. CRC Press, 130 pp. ISBN 97811380003081.
2. Briscoe, M.H. 1996. Preparing scientific illustrations: a guider to better posters, presentations and publications. 2nd ed. Springer, New York.
3. Milankov V. i Kakšić P. (2006) Metodologija naučno-istraživačkog rada. PMF, Novi Sad.

Learning outcomes (complied with the outcomes for the study programme): After successfully completing the exam and pre-exam obligations, the student acquires knowledge and skills in the organization of performing the research process and of its structure, as well as in the preparation and presentation of scientific results, including writing scientific papers.
Forms of tests and evaluation: • colloquium: 20 points • homework: 30 points • final exam: 50 points
Name and surname of teacher and associate:
Particularities needed to be emphasized for the subject:
Note (if needed):