



## Syllabus

**Term:** 2026/27/1      **Subject name:** Introduction to Scientific Work      **Subject code:** AFOLNA1301

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**Unit (Unit code)**      Institute of Geography and Earth Sciences (FOLDRAJZ)

**Lecturer responsible for the course:** Dr. PIRISI Gábor

**Requirement:** Term mark

**Classes per week :** 0/2/0

**Classes per term:** 0/26/0

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### Purpose of education:

Students finishing this course will be able to recognise spatial-related scientific problems, to form relevant hypothesis or research questions. They have the skill to use databases, including publication databases and search engines (WoS, Scopus, Google Scholar) and also reference manager programs (Mendeley). They will be able to read and analyse scientific papers critically. They know some of the possible data sources of geographical researches, and have the basic competence to download and handle statistic data. With knowing their own skills and preferences, they will be able to create a research plan for bachelor level. They know the overall structure of the scientific works/papers, and are able to cite and create list of references.

### Contents:

The order of the semester, mid-semester works and evaluation. About science and research. Introduction to scientific investigations. Inductive and deductive approaches, quantitative and qualitative approaches, positivism and humanism in researches. Ethical questions in geographical researches. Some fundamental questions of the geographic researches. Planning the research, the research as a project. How to find a good topic and form a relevant question in geography? Outlines and evaluation of the research plans: relevance, resources, feasibility. Using secondary sources in research. Criteria of scientific papers. Journals in science, journals in geography. Using databases (WoS, Scopus, Science Direct) and specialised search engines (Google Scholar). How and why to use a reference-manager software? introduction to the Mendeley. Citation in science. How to use other researches results? How to read and interpret scientific papers. Critical reading and evaluation of sources. Ethical questions: what is a plagiarism and how to avoid it. Statistical sources in geographical researches: their benefits and constraints. Overview of the available statistical databases in geography. Statistical data in practice: some basic hints. Fieldwork in geography. How to survey and measure in human and in physical geography on the field. Practice of field work: a simulation game. Evaluating field work simulations, further questions of field researches. Empirical surveys in human geography and social sciences. Goals, possibilities and limits of questionnaires. Interview, as a method. The questions of sampling, representation and validity. How to create scientific text. Overall characters and specifications of scientific texts. The structure of a paper, the role of the single elements in the structure. Style in scientific writing. Hints, tricks and traps – a practical overlook. How to cite in practice. The graphic elements of a paper. Figures, photos and maps, general criteria. How can figures support our argumentation? How to create a good figure for our paper? Creating presentations – how to “sell” or results. Selection of results, structure of presentation. Some questions of visibility and aesthetic: looks good, sounds better.

### System of examing and valuation:

Mid-semester work Week 1 - Week 2 Practical task: creating research topics using defined keywords. Week 3 Searching for relevant papers using the databases. Using Menedeley for creating citations and references-list.



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### System of examining and valuation:

Week 4 Analysing and evaluating research papers from critical approach with pre-defined aspects (Homework)  
Week 5 – Week 6 Statistical data in practice: three simple examples. Week 7 Field work simulation: observing, detecting and documenting geographical phenomenon, process or pattern in small scale. Week 8 Presenting the results of field work simulation. Week 9 Creating questionnaire in google forms. Week 10 – Week 11 – Week 12 Creating a thesis draft, contains introduction, goals, research questions, methods and references (in Mendeley) – homework. Week 13 – During the semester every homework and some of the tasks in the seminars will be evaluated in point-based system. The maximum of the points depends on the number of seminars each students took part. Students are allowed to miss two seminars as a maximum. Points will be classified to marks using the following categories: just less than 50% = 1 50 to 64.99% = 2 65 to 74.99% = 3 75 to 84.99% = 4 85+ = 5 A further requirement is, that every students need to upload all the homework, regardless from their presence in seminars. Without evaluation every students will fail, whose work contains plagiarism

### Bibliography:

B. Gomez; J. P. Jones (eds) 2010: Research Methods in Geography. Blackwell Publishing Ltd, 2010. N. Spence; A. Owens 2011: Methods of geographical analysis. Undergraduate study in Economics, Management, Finance and the Social Sciences. University of London, 62 p. Beverley Hancock, Elizabeth Ockleford, Kate Windridge 2009: An Introduction to Qualitative Research. The NIHR RDS for the East Midlands/Yorkshire & the Humber 39 p.

### Bibliography: