

Research Methods

Lecturer: Prof. Dr. Host Günter , Dr. Ina Bauerdorf , Technical University Braunschweig , Germany

Course Objectives

The course is an introductory course in research methods. It starts with a presentation of basic definitions, main questions and main approaches of the philosophy of science. Afterwards selected quantitative methods, their advantages and disadvantages and their usage in economics and business administration will be investigated. Main sources of scientific information will be discussed. Finally the way to write scientifically and to document scientific information properly will be presented.

Knowledge and skills after completing the course

The students should know about basic definitions, main topics and selected main results from important representatives of this subject. They should recognise the importance and influence of this questions and results for their own research. The students should know about opportunities and drawbacks of selected quantitative methods in consideration of their use in an economically context. The students should be able to use the main information sources and to analyse them critically. The students should be able to present their research results in different written forms (e.g. essay, report) in consideration of the main rules (e.g. citation).

Course format and teaching methods

(for the definition of the topics see below)

Top 1 : lecture, homework

Top 2 : introducing lecture, group work

Top 3 : introducing lecture, group work

Top 4 : introducing lecture, individual work, homework

Integration of theory with practice; relationship with other courses

The knowledge of quantitative methods, acquisition of information and the documentation of results in written forms have fundamental character and are useful in all other subjects, in theory and in practice.

Course content

- Fundamentals of philosophy of science
- Quantitative Methods
- Information Competence
- Scientific Writing

Exam

Regularly written exam. In addition written homework and presentation.

Reading list

Davis , P. J. ; Hersh, R.; Marchisotto, E.A. : The mathematical experience, Boston 1995.

Kuhn , T.S. : The Structure of Scientific Revolutions, 3. Ed., Chicago 1996.

Polya, G.: Mathematical Methods in Science, 3. Ed., Washington 1977.

Popper, K.R.: Logik der Forschung, 10. Aufl., Tübingen 1994.

Seiffert, H.: Einführung in die Wissenschaftstheorie, Band 1 – Sprachanalyse, Deduktion, Induktion in Natur- und Sozialwissenschaften, 10. Aufl., München 1983.

Seiffert, H.: Einführung in die Wissenschaftstheorie, Band 2 – Geisteswissenschaftliche Methoden: Phänomenologie, Hermeneutik und historische Methode, Dialektik, 8. Aufl., München 1983.

Broschüre zum wissenschaftlichen Arbeiten des IPFM