

Course title: Research Methodology for Technicians	Neptun code: GEVGT470-a
Course coordinator: Dr. Károly Jármai, DSc, professor	
type of lesson and number of lessons: lecture (2)	
method of evaluation: colloquium	
curriculum location of the subject: (autumn/spring semester): autumn and spring	
pre-study conditions (<i>if any</i>): -	
The task and purpose of the subject:	
General research methodology basics. Sources of knowledge. The concept, meaning and application of scientific research. Difficulties of scientific research. The scientific research process. Choosing a topic, defining the research problem. Exploring the background to research, reviewing literature and other sources. Developing a conceptual framework for research - conceptualisation. Formulating the objectives of the research. Designing the data collection. Familiarisation with the various scientific literature databases: Web of Science, Scopus, Google Scholar, ProQuest, ScienceDirect, SpringerLink, etc. Measurement methods and data types. Quantitative research methods. Qualitative research methods. Quantitative and qualitative research methods. Journal classification system, content and format requirements. Case studies	
Course description:	
An introduction to research methodology. To familiarise students with the importance and applications of scientific research. To show how data collection in technical fields can be designed. To familiarise students with the various scientific literature databases. To introduce the possibilities and requirements for publication.	
Required literature:	
<ol style="list-style-type: none"> 1. Ranjit Kumar: Research Methodology: A Step-by-Step Guide for Beginners, Fourth Edition, SAGE Publishing, https://study.sagepub.com/kumar4e 2. Shanti Bhushan Mishra, Shashi Alok: Handbook of Research Methodology, Educreation Publishing, 2011, 146 p. https://books.google.hu/books?id=O54wDwAAQBAJ&printsec=frontcover&hl=hu&source=gb_s_ge_summary_r&cad=0#v=onepage&q&f=false 	
Recommended literature:	
<ol style="list-style-type: none"> 1. Uwe Flick: Introducing Research Methodology: A Beginner's Guide to Doing a Research Project, Second Edition, Los Angeles: Sage. https://irigasi.info/wp-content/uploads/2021/04/INTRODUCING-RESEARCH-METHODOLOGY-UWE-FLICK.pdf 2. Lucienne T.M. Blessing, Amaresh Chakrabarti: DRM, a Design Research Methodology, Springer Nature, 2009, https://link.springer.com/book/10.1007/978-1-84882-587-1#toc 	