



Adam Mickiewicz University in Poznań

Doctoral School of Exact Sciences AMU

R language as a tool for data science

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Scientific lectures, workshops

Field of science	Computer Science/Mathematics	
Teaching method	Lectures	
Language	English/Polish	
Numbers of hours	20	
Aims of the course	The aim of the course is to present basic solutions in the field of data analysis and their implementation in R.	
Course contents	<ul style="list-style-type: none"> <li>• Introduction to the R language (data types and structures, operations, functions)</li> <li>• Data import from a file on disk and from the Internet, data processing and aggregation.</li> <li>• Data visualization. Elements of exploratory analysis.</li> <li>• Elements of statistics (statistical tests, regression)</li> <li>• Good practice in R</li> </ul>	
Prerequisites and co-requisites	<ul style="list-style-type: none"> <li>• Basics of calculus and linear algebra</li> <li>• Basics of mathematical statistics</li> </ul>	
<b>Learning outcomes</b>		
	On completion of the course PhD candidates will be able to:	Assessment mode
	<ul style="list-style-type: none"> <li>• understand basic data analysis techniques</li> <li>• work with data using the R Studio</li> <li>• visualize data</li> </ul>	E_W01 E_W02 E_U01 E_U02 E_U05
Literature	<ul style="list-style-type: none"> <li>• Andrews M., Doing Data Science in R, Sage Publications Ltd, 2021</li> <li>• Wickham H., Golemund G., Cetinkaya-Rundel M., R for Data Science, O'Reeilly, 2023</li> <li>• Wiley M., Wileu J.F., Advanced R Statistical Programming and Data Models, APress, 2019</li> </ul>	
Additional information		