



Statistical programming with R (S24)

05 – 09 July 2021

Course location:
Koningsberger building
Room Cosmos
(1.26)

Course Director: Dr. Gerko Vink
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Please note that the schedule is in Central European Summer Time

Saturday 03 & Sunday 04 July 2021		
Time	Activity	Description
12.00 – 18.00	Key pick up	<i>You will find the exact key pick up location in the pre-departure information, which becomes available after you have paid the course fee.</i>

Day	Time	Type	Description	Location
Monday	09:00 - 09:30	Lecture	<i>Introduction to R and markdown</i> - The language - How to start - Basic commands	
	09:30 - 10:15	Computer Lab	R and R-studio	
	10:15 - 10:45	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.	
	11:00 - 11:45	Lecture	<i>How is R organized?</i> - Vectors - Matrices - Dataframes - Lists - Workspaces	
	11:45 - 12:30	Computer Lab	R and R-studio	
	14:00 - 14:30	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.	
	14:30 - 15:30	Lecture	<i>R-functionality and basic manipulation</i> - <i>Downloading and installing packages</i> - <i>Namespaces</i> - <i>Environment</i>	
	15:45 - 16:30	Computer Lab	R and R-studio	
	16:30 - 17:00	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.	



Day	Time	Type	Description	Location
Tuesday	09:00 - 09:30	Lecture	<i>Data generation and manipulation</i>	
	09:30 - 10:15	Computer Lab	R and R-studio	
	10:15 - 10:45	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.	
	11:00 - 11:45	Lecture	<i>Data manipulation</i> - <i>Creating a function</i> - <i>`for`-loops</i> - <i>apply functions</i>	
	11:45 - 12:30	Computer Lab	R and R-studio	
	14:00 - 14:30	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.	
	14:30 - 15:30	Lecture	<i>Advanced data manipulation</i> - <i>pipelines</i> - <i>efficient data formats</i>	
	15:45 - 16:30	Computer Lab	R and R-studio	
16:30 - 17:00	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.		

Day	Time	Type	Description	Location
Wednesday	09:00 - 09:30	Lecture	<i>Statistical Models</i>	
	09:30 - 10:15	Computer Lab	R and R-studio	
	10:15 - 10:45	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.	
	11:00 - 11:45	Lecture	<i>Statistical Inference</i>	
	11:45 - 12:30	Computer Lab	R and R-studio	
	14:00 - 14:30	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.	
	14:30 - 15:30	Lecture	<i>Data visualization</i>	
	15:45 - 16:30	Computer Lab	R and R-studio	
16:30 - 17:00	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.		



Day	Time	Type	Description	Location
Thursday	09:00 - 09:30	Lecture	<i>Model fitting: estimation</i>	
	09:30 - 10:15	Computer Lab	R and R-studio	
	10:15 - 10:45	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.	
	11:00 - 11:45	Lecture	<i>Model fitting: prediction</i>	
	11:45 - 12:30	Computer Lab	R and R-studio	
	14:00 - 14:30	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.	
	14:30 - 15:30	Lecture	<i>Model fitting: testing</i>	
	15:45 - 16:30	Computer Lab	R and R-studio	
	16:30 - 17:00	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.	

Day	Time	Type	Description	Location
Friday	09:00 - 09:30	Lecture	<i>Statistical learning and crossvalidation</i>	
	09:30 - 10:15	Computer Lab	R and R-studio	
	10:15 - 10:45	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.	
	11:00 - 11:45	Lecture	<i>Bootstrapping</i>	
	11:45 - 12:30	Computer Lab	R and R-studio	
	14:00 - 14:30	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.	
	14:30 - 15:30	Lecture	<i>Monte carlo simulation</i>	
	15:45 - 16:30	Computer Lab	R and R-studio	
	16:30 - 17:00	Plenary Discussion	Students and teachers discuss and present their solutions to the computer lab.	

For information about the Social Programme, please visit the [Utrecht Summer School website!](#)