Coding Intro

Introduction to Programming for Data Science: The course participants get an overview over the typical steps in a data science project. Loading, preparing, visualizing and modelling data are the key components of the course.

Planned ECTS: , **Number of learners:** 30, **Mode of delivery**: Face to Face
Status: NOT STARTED, **Course public access**: Private
Contributors: Jan Bischoff

Course learning outcome	Level	Weight
Course participants can name the different steps of a data science project.	Remembering	5
Participants know the most important packages for visualization.	Remembering	5
Participants know the most important packages for tidying data.	Remembering	5
Participants know the most important packages for importing data.	Remembering	5
Participants know the most important packages for modelling.	Remembering	5
Participants know the outcome of simple software code.	Understanding	15
Participants can develop simple code to visualize data.	Applying	15
Participants can develop simple code to tidy data.	Applying	15
Participants can develop simple code to import and recode data.	Applying	15
Participants can develop simple code to model data.	Applying	15
	Total Weight: 100	

Topic / Unit name	Workload	Learning type	Mode of delivery			Groups	Collaboration	Feedback	Assessment		
									Points	Types	Providers
Introduction											
Course participants can name the different steps of a data science project. (**100%**)											
UN Votes Case Study											
Case Study Presentation	40 min	Acquisition	Onsite	Synchronous	Teacher present	No	No		No	No	
Total unit workload	0.66h										

Topic / Unit name	Workload	Learning type	Mode of delivery				Groups	Collaboration	Feedback	Assessment		
										Points	Types	Providers
Visualizing data												
Participants know the most important packages for visualization. (**100%**), Participants can develop simple code to visualize data. (**100%**)												
Visualizing Data												
Presentation Basic visualizations of categorical and numerical data get introduced.	60 min	Acquisition	Onsite	Synchronous	Teacher present		No	No	No	No		
Exercises Hands On exercises for visualizations of numerical and categorical data.	20 min	Practice	Onsite	Synchronous	Teacher present		Yes	Yes	Teacher	No		
Total unit workload	1.33h											

Topic / Unit name	Workload	Learning type	Mode of delivery				Groups	Collaboration	Feedback	Assessment		
										Points	Types	Providers
Wrangling and tidying data												
Participants know the most important packages for tidying data. (**100%**), Participants can develop simple code to tidy data. (**100%**)												
Wrangling and tidying data												
Presentation Presentation about typical issues with data and how to deal with them.	60 min	Acquisition	Onsite	Synchronous	Teacher present		No	No	No	No		
Exercises Hands on exercises about dealing with data issues and preparing data for visualisations and modelling.	20 min	Practice	Onsite	Synchronous	Teacher present		Yes	Yes	Teacher	No		
Total unit workload	1.33h											

Topic / Unit name	Workload	Learning type	Mode of delivery			Groups	Collaboration	Feedback	Assessment		
									Points	Types	Providers
Importing and recoding data											
Participants know the most important packages for importing data. (**100%**), Participants can develop simple code to import and recode data. (**100%**)											
Importing and recoding data											
Presentation Presenting different ways to import data and recode data into the right format.	60 min	Acquisition	Onsite	Synchronous	Teacher present	No	No	No	No		
Exercises Hands on exercises to load and recode data.	20 min	Practice	Onsite	Synchronous	Teacher present	Yes	Yes	Teacher	No		
Total unit workload	1.33h										

Topic / Unit name	Workload	Learning type	Mode of delivery			Groups	Collaboration	Feedback	Assessment		
									Points	Types	Providers
Modelling Participants know the most important packages for modelling. (**100%**), Participants can develop simple code to model data. (**100%**)											
Modelling											
Presentation Presenting the typical data modelling steps and the theory behind linear regressions.	60 min	Acquisition	Onsite	Synchronous	Teacher present	No	No	No	No		
Exercises Hands on modelling exercises using linear regressions.	20 min	Practice	Onsite	Synchronous	Teacher present	Yes	Yes	Teacher	No		
Total unit workload	1.33h										

Total course workload: 6h