

Course number		U-LAS11 20005 SE55					
Course title (and course title in English)		Data Analysis Practice I-E2 Data Analysis Practice I-E2		Instructor's name, job title, and department of affiliation			
Group	Natural Sciences		Field(Classification)		Data Science(Development)		
Language of instruction	English		Old group	Group B		Number of credits	2
Number of weekly time blocks	1	Class style	Seminar (Face-to-face course)		Year/semesters	2024 • First semester	
Days and periods	Thu.4		Target year	All students		Eligible students	For all majors
[Overview and purpose of the course]							
<p>Media and web apps regularly infiltrate our daily lives and we are confronted with a constant flow of information. How can we use public data to our advantage and discover patterns or extract useful information?</p> <p>This course is aimed at students from all disciplines who want to learn essential data analytics skills. Prior specialized knowledge is not required and topics will be introduced at a beginner ' s level. The course imparts methods to obtain, clean, analyze, and visualize data from the web via python and communicates basic concepts of data mining and statistical analyses.</p>							
[Course objectives]							
<p>In this course, students will</p> <ul style="list-style-type: none"> - learn about the theoretical basis of data mining and statistical learning - gain the skills to retrieve, analyze, explore, and visualize data and draw conclusions for decision making - become familiar with computational operations, python, and data structures 							
[Course schedule and contents)]							
<p>[WEEKS 01-07] THEORY:</p> <ul style="list-style-type: none"> - Fundamental statistics and exploratory data analysis - Data visualization - Linear regression - Classification - Supervised learning: decision trees, random forest, support vector machines, others - Unsupervised learning: clustering <p>[WEEKS 08-14] PRACTICE:</p> <p>Introduction to python (jupyter), demonstration and execution of data analysis workflows based on concepts covered in preceding theory section.</p>							
[Course requirements]							
Access to a personal computer is required in order to complete homework assignments.							
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Data Analysis Practice I-E2(2)

[Evaluation methods and policy]

20 % Class attendance
30 % Mid-term exam
50 % Homework assignment

[Textbooks]

Instructed during class

[References, etc.]

(References, etc.)
Introduced during class

[Study outside of class (preparation and review)]

Weekly review of course content is advised.
The completion of the homework assignment in groups of 1 to 3 students requires additional time investment outside of class.

[Other information (office hours, etc.)]

Announced during class.