



## Course syllabus

School of Business and Economics  
Department of Economics and Statistics

1ST915 Visualisering av data, 7,5 högskolepoäng  
Data visualisation, 7.5 credits

### **Main field of study**

Statistics

### **Subject**

Statistics

### **Level**

First cycle

### **Progression**

G1F

### **Date of Ratification**

Approved 2024-02-19.

The course syllabus is valid from autumn semester 2024.

### **Prerequisites**

Statistics 15 credits (descriptive statistics, statistical inference, and regression analysis), or equivalent. English 6, or the equivalent.

### **Objectives**

After completing this course the student should be able to:

- discuss theoretical and practical construction of data visualization
- explain basic principles and strategies for creating good visualization of data
- apply appropriate visualization method for a given problem setting
- present in writing the visualization output produced from the data
- interpret the produced visualization results
- critically assess modern visualization tools covered in the course

## Content

The course contains:

- introduction to R, R packages
- introduction to data formats, import and manage data sets
- introduction to Base R graphics, ggplot2
- textdata and visualization
- geographical/demographic/spatial visualization through maps
- summarization and abstraction of large data sets
- visualization of statistical models

## Type of Instruction

Teaching is carried out as distance learning with help from a learning platform and consists of self-studies based on instructions from the course coordinator. The teaching consists of computer lab introductions and individual communication between students and teacher. The course requires access to a computer with internet connection and a webcam.

## Examination

The course is assessed with the grades A, B, C, D, E or F.

The course is examined through two individual written computer labs 2 credits each, an individual written project carried out using the R software 2 credits, and an individual written digital quiz 1.5 credits.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail.

Resit examination is offered in accordance with Linnaeus University's Local regulations for courses and examination at the first- and second-cycle levels.

In the event that a student with a disability is entitled to special study support, the examiner will decide on adapted or alternative examination arrangements.

## Course Evaluation

A course evaluation should be conducted during the course or in connection with its conclusion. The results and analysis of the completed course evaluation should be promptly communicated to students who have completed the course. Students participating in the next course instance should be informed of the results of the previous course evaluation and any improvements that have been made, no later than at the start of the course.

## Overlap

The course cannot be included in a degree along with the following course/courses of which the content fully, or partly, corresponds to the content of this course:  
4NA915 with 6 credits.

## Required Reading and Additional Study Material

Chang, W. *R Graphics Cookbook, practical recipes for visualizing data*. O'Reilly Media, Inc, USA. Latest edition.

**Additional study material**

R Online Manuals (electronic resources included in the R software computer program.  
The manual cannot/must not be purchased).