



LUND
UNIVERSITY

School of Economics and Management

STAE04, Statistics: Data Visualisation, 4 credits

Statistik: Visualisering av data, 4 högskolepoäng

First Cycle / Grundnivå

Details of approval

The syllabus was approved by The Board of the Department of Statistics on 2019-12-09 to be valid from 2020-01-20, spring semester 2020.

General Information

The course can be taken by students admitted to Bachelor programmes at Lund University School of Economics and Management.

Language of instruction: English

Main field of studies

Statistics

Depth of study relative to the degree requirements

G1F, First cycle, has less than 60 credits in first-cycle course/s as entry requirements

Learning outcomes

Knowledge and understanding

For passing the course the student shall

- demonstrate knowledge of the theoretical and practical construction of visualisations, and
- demonstrate understanding of how the type of data impacts the visualisation and what components are appropriate.

Competence and skills

For passing the course the student shall

- demonstrate the skill to independently, using software, visualise various types of data,
- demonstrate the ability to make appropriate choices in designing visualisations, and

- demonstrate the ability to in writing present and discuss visualisations in dialogue with others.

Judgement and approach

For passing the course the student shall

- demonstrate the ability to assess visualisations with respect to clarity, accessibility and ethics, and
- demonstrate insight into the importance of the design of visualisations with respect to communicative properties, accessibility and ethics.

Course content

The course provides an introduction to theoretical and practical aspects of data visualisation. The following topics are covered in the course:

- Introduction and background
- Introduction to R and ggplot2
- Visualisation of data with few observations
- Choice of colour, symbols, scales, and perspective (2D, 3D)
- Summation and abstraction (many observations)
- Interactive visualisations
- Maps and spatial data
- Visualisation of statistical models

Course design

The course consists of self-study of literature with web-based support, including video recordings, as well as exercises in producing visualisations on your own. Computer sessions with supervision is offered to a limited extent. An important part of the course is to critique visualisations by other course participants and to respond to critique by them.

Assessment

The assessment consists of web-based quizzes and written assignments as well as peer reviewing of the latter.

The University views plagiarism very seriously, and will take disciplinary actions against students for any kind of attempted malpractice in examinations and assessments. Plagiarism is considered to be a very serious academic offence. The penalty that maybe imposed for this, and other unfair practice in examinations or assessments, includes suspension from the University.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, Pass.

Pass. A result that satisfies the requirements with regard to theoretical depth, practical relevance, analytical ability and independence.

Fail. An inadequate result with regard to theoretical depth, practical relevance, analytical ability and independence.

Entry requirements

General entry requirements, and STAA31 Statistics: Basic Course 1 or STAA36 Statistics: Fundamentals of Business Analytics, or the equivalent.

Subcourses in STAE04, Statistics: Data Visualisation

Applies from V20

- 2001 Quizzes, 1,5 hp
Grading scale: Fail, Pass
- 2002 Assignments, 2,5 hp
Grading scale: Fail, Pass