



LUND
UNIVERSITY

School of Economics and Management

**DABN21, Data Analytics and Business Economics:
Programming in R, 3.5 credits**
Dataanalys och ekonomi: Programmering i R, 3,5 högskolepoäng
Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by The Board of the Department of Economics on 2022-05-31 and was last revised on 2022-05-31. The revised syllabus applies from 2022-05-31, autumn semester 2022.

General Information

This is a single subject master course in data analytics and business economics. The course is mandatory in the master programme Data Analytics and Business Economics. The course is optional within a number of master programmes at Lund University.

Language of instruction: English

(Teaching may be in Swedish if all registered students have a good knowledge of Swedish.)

Main field of studies

Data Analytics and Business Economics

Depth of study relative to the degree requirements

A1N, Second cycle, has only first-cycle course/s as entry requirements

Learning outcomes

Knowledge and understanding

Students shall have an understanding of

- basic programming concepts, data structures, and statements and how to apply them in the R language,
- how to write and read a basic script written in R.

Competence and skills

Students shall have the ability to independently:

- convert basic algorithms into running R-code,
- write code that follow a proper code style,
- install and use R packages,
- debug and profile a basic R-script,
- navigate and build R-scripts using a modern integrated development environment.

Judgement and approach

Students shall have developed the ability to pursue further studies in the subject and should be able to search for and evaluate information with a high degree of independence. Students shall also have developed the ability to write an empirical report and critically assess the contents of reports of others.

Course content

The following topics will be covered in the course:

- basic programming concepts, data structures, conditional statements, functions, scope, and classes, as well as the basic R-syntax for these concepts,
- using built-in functions in R, such as "lm", "max" and "apply",
- creating own functions in R,
- using basic R data types, such as lists, vectors and matrices,
- using an integrated development environment, such as R-studio,
- basic debugging procedures,
- loading and using basic R-packages,
- using modern data manipulation packages, such as "dplyr".

Course design

1. Teaching: Teaching consists of lectures and exercises.

Assessment

1. Examination: The examination consists of online quizzes and home assignments that are peer reviewed. Other forms of examination may be used to a limited extent.

2. Limitations on the number of examination opportunities: –

The University views plagiarism and other academic dishonesty very seriously, and will take disciplinary action against students for any kind of attempted malpractice in connection with examinations and assessments. Plagiarism is considered to be a very serious academic offence. The penalty that may be imposed for this, and other unfair practices in examinations or assessments, includes suspension from the University for a specified period.

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.

Grades

Marking scale: Fail, Pass.

1. Grade. Characteristic.

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.

2. Weighting grades from different parts of the course: –

3. Grading scales for different parts of the course: –

Entry requirements

Students admitted to the master programme Data Analytics and Business Economics are eligible for this course. For other students, STAA31 Statistics: Basic Course 1 or STAA36 Statistics: Fundamentals of Business Analytics, or the equivalent, is required.

Further information

1. Transitional regulations: The course replaces DABN11 "Programming in R".

2. Limitations in the period of validity: –

3. Limitations: This course may not be included in the same degree as DABN11 "Programming in R".

4. Similar courses: –

5. Limitations in renewed examination: –