Basic Course 8: Quantitative methods

About the course

subject	Den internationale samfundsvidenskabelige bacheloruddannelse
Activity type	Basic course
Teaching language	English
Registration	Registration is happing through stads selvbetjeningwithin the announced registration period, as you can see on the Studyadministration homepage. When registering for courses, please be aware of the potential conflicts between courses or exam dates on courses. The planning of course activities at Roskilde University is based on the recommended study programs which do not overlap. However, if you choose optional courses and/or study plans that goes beyond the recommended study programs, an overlap of lectures or exam dates may occur depending on which courses you choose.
Detailed description of content	The course introduces, uses and applies descriptive and inferential statistics; Pearson's correlation coefficient, t-test, Chi-square, cross-tables, hypothesis testing, ANOVA, and regression models. Students should master key aspects of basic tools for data sampling, gathering, inspection, control and organization of data, classification of categories of variables, and data analysis. Students will develop their capabilities of statistical thinking and of analysing data critically. We aim for that students can discuss the appropriateness of statistical methods used in published articles, reports, and interpret the meaning of their results. Further students should be able to… • apply statistical tools for project work and understand their practical implementations. demonstrate full understanding of basic statistics through reading, speaking, and writing about basic statistical concepts. • have formulation/verbalizing competency about quantitative data analysis in social science and business. • present and explain issues/topics related to quantitative data analysis concerning social sciences and business in a professional clear manner. • relate, understand, and apply post-positivist methodology to research questions relevant in social sciences studies. • understand and apply post-positivist and mixed methods research methodologies. • understand and work scientifically with themes of quantitative data analysis. • write up a methodology part/chapter using basic quantitative data analysis. • learn the basics of coding in the R software (RStudio).
Expected work effort (ECTS-declaration)	ECTS 5, In total: 135 hours, Class Teaching: 20 hours, Class Exercises: 20 hours, Preparation: 91.5 hours, Exam: 3.5 hours
Course material and Reading list	Business Statistics: Communicating with Numbers" (4th international student edition), by Sanjiv Jaggia and Alison Kelly, McGraw Hill, ISBN 978-1-260-59756-1
Evaluation- and feedback forms	Students are evaluated accoridng to the final result of the exam. Students evaluate the course through moodle.
Administration of exams	SIB Registration & Exams (sib-exams@ruc.dk)
Responsible for the activity	Johannes Kabderian Dreyer (jodreyer@ruc.dk) Fuad Mehraliyev (fuadm@ruc.dk)

ECTS	5
Learning outcomes and assessment criteria	• Knowledge and understanding of different types of quantitative methods • Skills in analysing multivariate contexts with statistical methods • Skills in interpreting existing statistical analyses and being critical of them • Skills in analysing statistical connections both in terms of significance and strength • Competency in evaluating the consequences of the methodological choices • Competency in using relevant software for statistical analysis of large datasets • Competency in using statistical methods and tests to analyse quantitative data
Overall content	The course provides students with a comprehensive introduction to quantitative methods and applied practical statistics. The course presents students with basic technical terminology as well as quantitative functional tools such as methods in questionnaire surveys, descriptive statistics, hypothesis and statistical tests, statistical significance, consistency and linear regression. These concepts and tools will be exemplified and executed in a software package selected by the course leader. The course consists of lectures in which the fundamental concepts and research questions are reviewed, followed by exercises where the students solve varied tasks by using statistical methods on various datasets.
Teaching and working methods	The course consists of both lectures and seminars. As part of the course, the students will participate in group work and write an assignment. The course leader will specify the guidelines and formalities of the assignment.
Type of activity	Mandatory course
Form of examination (p1)	Individual written invigilated exam in a topic(s) given by the lecturer. The duration of the exam is 3,5 hours. Permitted support and preparation materials for the exam: All. Assessment: 7-point grading scale.
Form of Re-examination (p1)	Samme som ordinær eksamen
Exam code(s)	Exam code(s) : U27155

Course days:

Hold: Session 2

BC8 Quantitative Methods - Session 2 (SIB)

time 16-02-2024 10:15 til
16-02-2024 12:00

location 22.2-009 - undervisningslokale (56)

BC8 Quantitative Methods - Session 2 (SIB)

time 23-02-2024 10:15 til
23-02-2024 12:00

location 22.2-009 - undervisningslokale (56)

BC8 Quantitative Methods - Session 2 (SIB)

time 01-03-2024 10:15 til
01-03-2024 12:00

location 22.2-009 - undervisningslokale (56)

BC8 Quantitative Methods - Session 2 (SIB)

time 08-03-2024 10:15 til
08-03-2024 12:00

location 22.2-009 - undervisningslokale (56)

BC8 Quantitative Methods - Session 2 (SIB)

time 15-03-2024 10:15 til
15-03-2024 12:00

location 22.2-009 - undervisningslokale (56)

BC8 Quantitative Methods - Session 2 (SIB)

time 22-03-2024 10:15 til
22-03-2024 12:00

location 22.2-009 - undervisningslokale (56)

BC8 Quantitative Methods - Session 2 (SIB)

time 05-04-2024 10:15 til
05-04-2024 12:00

location 22.2-009 - undervisningslokale (56)

BC8 Quantitative Methods - Session 2 (SIB)

time 12-04-2024 10:15 til
12-04-2024 12:00

location 22.2-009 - undervisningslokale (56)

BC8 Quantitative Methods - Session 2 (SIB)

time 19-04-2024 10:15 til
19-04-2024 12:00

location 22.2-009 - undervisningslokale (56)

BC8 Quantitative Methods - Session 2 (SIB)

time 26-04-2024 10:15 til
26-04-2024 12:00

location 22.2-009 - undervisningslokale (56)