



# Exchange programme Vrije Universiteit Amsterdam

Vrije Universiteit Amsterdam - Exchange programme Vrije Universiteit Amsterdam - 2024-2025

## Exchange

Vrije Universiteit Amsterdam offers many English-taught courses in a variety of subjects, ranging from arts & culture and social sciences, neurosciences and computer science, to economics and business administration.

The International Office is responsible for course approval and course registration for exchange students. For details about course registration, requirements, credits, semesters and so on, please [visit the exchange programmes webpages](#).

# Quantitative Research Methodology

Course Code	S_QNRM
Credits	6
Period	P1
Course Level	200
Language Of Tuition	Dutch / English
Faculty	Faculty of Social Sciences
Course Coordinator	dr. F.A. Nagel
Examiner	dr. F.A. Nagel
Teaching Staff	dr. F.A. Nagel, L.S. Mastenbroek MSc, dr. K. Welbers, R. Buma MSc
Teaching method(s)	Written partial exam, Study Group, Computer lab, Lecture

## Course Objective

At the end of the course, the student is able to:

- identify advantages and disadvantages of experimental and observational designs in terms of internal and external validity
- causal models: recognize models with confounding variables, mediation and moderation in a question or hypothesis
- constructing a scale and as part of scale construction apply reliability analysis in R, interpret the results and report on them
- apply analysis of variance and linear regression analysis in R; interpret the results and report on them
- interpret results in terms of underlying causal models: confounding variables, mediation, and moderation

## Course Content

In this course, students learn the basics of multivariate statistical techniques commonly used in quantitative research in communication science. The emphasis is on testing hypotheses about cause-and-effect relationships and the interpretation of the analysis results, both in experimental and in non-experimental research. This knowledge is useful not only for properly testing hypotheses yourself, but also for critically evaluating research conducted by others.

This course teaches the theory and practice of quantitative research methods frequently used within communication science. The student learns the logic and purpose of experimental and observational research designs, as well as the advantages and disadvantages in terms of internal and external validity. Within the context of causal modelling, models with confounding variables, mediation and moderation will be discussed and results of analyses will be related to these causal models. Reliability analysis is applied in order to learn how to construct a reliable scale. Building upon the first year's course Descriptive and Inferential Statistics, multivariate data analysis techniques will be introduced, focusing on analysis of variance and linear regression analysis. All mentioned techniques are applied using R.

## Additional Information Teaching Methods

lectures, working groups and R labs

## Method of Assessment

interim tests and group assignments

## Additional Information Target Audience

Second year students bachelor Communication Science

## Recommended background knowledge

