Course Name	Time Series Analysis
Contents and Objectives	Content: • Description of time series • Applications in finance, economics and industry • Trends • Seasonality • Periods • The correlation function • Fourier transform • Relation to stochastic processes • Spectrum • Smoothing Objectives of the course: The course addresses essential tools to understand time series analysis, starting from classical time series. We discuss economic situations which allow a meaningful application of time series including trends, periods and seasonality. We further address limitations of time series, particularly when predicting future values. An important component of the lecture is the analysis of real data by employing statistical software as R or SPSS.
Teaching	This course consists of lectures and exercise classes. • Lecture: Time Series Analysis (2h/week) • Exercise class: Time Series Analysis (2h/week) This class can be taught remotely.
Prerequisites	Statistics and probability theory are helpful.
Verwendbarkeit des Moduls	-
Examination	Written exam (60 minutes)
Credits	6 ECTS points
Frequency	This course is given at least once in 2 years.
Workload	The estimated total working time for this course is 180 hours.
Duration	This course is given during one semester.