

# COURSE DETAIL

## MATHEMATICAL STATISTICS: TIME SERIES ANALYSIS

**Country**

Sweden

**Host Institution**

Lund University

**Program(s)**

Lund University

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Statistics Mathematics

**UCEAP Course Number**

135

**UCEAP Course Suffix****UCEAP Official Title**

MATHEMATICAL STATISTICS: TIME SERIES ANALYSIS

**UCEAP Transcript Title**

TIME SERIES ANALYS

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

Time series analysis concerns the mathematical modeling of time-varying phenomena, e.g., ocean waves, water levels in lakes and rivers, demand for electrical power, radar signals, muscular reactions, ECG signals, or option prices at the stock market. The structure of the model is chosen both concerning the physical knowledge of the process, as well as using observed data. Central problems are the properties of different models and their prediction ability, estimation of the model parameters, and the model's ability to accurately describe the data. Consideration must be given to both the need for fast calculations and the presence of measurement errors. The course gives a comprehensive presentation of stochastic models and methods in time series analysis. Time series problems appear in many subjects and knowledge from the course is used in, i.e., automatic control, signal processing, and econometrics.

### Language(s) of Instruction

English

### Host Institution Course Number

MASM17/FMSN45

### Host Institution Course Title

MATHEMATICAL STATISTICS: TIME SERIES ANALYSIS

### Host Institution Campus

Lund

### Host Institution Faculty

Science and Engineering

### Host Institution Degree

### Host Institution Department

Mathematics

[Print](#)