



## Course and Examination Fact Sheet: Spring Semester 2018

### 8,314: Time Series Econometrics

ECTS credits: 4

#### Overview examination/s

(binding regulations see below)

Central - Written examination (70%, 90 mins.)

Decentral - Group examination paper (all given the same grades) (30%)

#### Attached courses

Timetable -- Language -- Lecturer

[8,314,1.00 Time Series Econometrics](#) -- Englisch -- [Bonev Petyo](#)

#### Course information

##### Course prerequisites

Standard knowledge of statistics and basic matrix algebra knowledge.

#### Course content

The course offers an introduction to time series analysis in the time domain with applications to macroeconomic and financial data.

The course is relevant for students planning to work professionally with economic time series data, such as macro-economic or financial data. The class covers the most important linear times series models, discusses their properties and estimation strategies. Students learn how to analyze, appropriately model and predict time series data.

#### Course structure

Main Topics to be covered

- Background and introduction to Time series modelling in the time domain.
- Fundamental concepts in time series analysis
- ARMA modelling, identification, estimation and forecasting
- Non-stationary series, unit roots and testing for unit roots
- Vector auto regressions, structural modelling and Causality
- Co-integration and error correction

#### Course literature



## Reading Material

- Lecture notes

## Additional Material

- Peter J. Brockwell, Richard Davis, Introduction to Time Series and Forecasting, Springer-Verlag, 2002
- Walter Enders, Applied Economic Time Series, Wiley, New York, 2nd edition 2004.
- James D. Hamilton, Time Series Analysis, Princeton University Press, 1994.
- Brockwell and Davis , "Introduction to Time Series and Forecasting, 2nd edition", Springer Texts in Statistics 2002

## Additional course information

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## Examination information

### Examination sub part/s

#### 1. Examination sub part (1/2)

##### Examination time and form

Central - Written examination (70%, 90 mins.)

##### Remark

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##### Examination-aid rule

Extended Closed Book

The use of aids is limited; any additional aids permitted are exhaustively listed under "Supplementary aids". Basically, the following is applicable:

- At such examinations, all the pocket calculators of the Texas Instruments TI-30 series and mono- or bilingual dictionaries (no subject-specific dictionaries) without hand-written notes are admissible. Any other pocket calculator models and any electronic dictionaries are inadmissible.
- In addition, any type of communication, as well as any electronic devices that can be programmed and are capable of communication such as notebooks, tablets, PDAs, mobile telephones and others, are inadmissible.
- Students are themselves responsible for the procurement of examination aids.

##### Supplementary aids

no supplementary aids allowed

##### Examination languages

Question language: English

Answer language: English

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#### 2. Examination sub part (2/2)

##### Examination time and form

Decentral - Group examination paper (all given the same grades) (30%)

##### Remark



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## Examination-aid rule

### Term papers

- Term papers must be written without anyone else's help and in accordance with the known quotation standards, and they must contain a declaration of authorship.
- The documentation of sources (quotations, bibliography) has to be done throughout and consistently in accordance with the APA or MLA standards. The indications of the sources of information taken over verbatim or in paraphrase (quotations) must be integrated into the text in accordance with the precepts of the applicable quotation standard, while informative and bibliographical notes must be added as footnotes (recommendations and standards can be found, for example, in METZGER, C. (2015), *Lern- und Arbeitsstrategien* (11th ed., 4th printing). Aarau: Sauerländer).
- For any work written at the HSG, the indication of the page numbers both according to the MLA and the APA standard is never optional.
- Where there are no page numbers in sources, precise references must be provided in a different way: titles of chapters or sections, section numbers, acts, scenes, verses, etc.
- For papers in law, the legal standard is recommended (by way of example, cf. FORSTMOSER, P., OGOREK R. et SCHINDLER B. (2014, *Juristisches Arbeiten: Eine Anleitung für Studierende* (5. Auflage), Zürich: Schulthess, or the recommendations of the Law School).

## Supplementary aids

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## Examination languages

Question language: English

Answer language: English

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## Examination content

Fundamental concepts in time series Analysis

ARMA modelling, identification, estimation and forecasting

non-stationary series, unit roots and testing for unit roots

Vector auto regressions, structural modelling and Causality

- Co-integration and error correction.

## Examination relevant literature

Lecture notes, assignments. All examination relevant literature will be published by 31 March 2018.



### Please note

We would like to point out to you that this fact sheet has absolute priority over other information such as StudyNet, faculty members' personal databases, information provided in lectures, etc.

When will the fact sheets become binding?

- Information about courses and examination time (central/decentral and grading form): from the start of the bidding process on 25 January 2018
- Information about decentral examinations (examination-aid rule, examination content, examination relevant literature): after the 4th semester week on 19 March 2018
- Information about central examinations (examination-aid rule, examination content, examination relevant literature): from the start of the enrolment period for the examinations on 09 April 2018

Please look at the fact sheet once more after these deadlines have expired.