



## Course and Examination Fact Sheet: Spring Semester 2020

### 8,312: Microeconometrics

ECTS credits: 4

#### Overview examination/s

(binding regulations see below)

Central - Written examination (60%, 60 mins.)

Decentral - examination paper written at home (individual) (15%)

Decentral - Group examination paper with presentation (all given the same grades) (25%)

#### Attached courses

Timetable -- Language -- Lecturer

[8,312,1.00 Microeconometrics](#) -- Englisch -- [Lechner Michael](#)

#### Course information

##### Course prerequisites

Students should be familiar with the material taught in Data Analytics 1 & 2.

##### Learning objectives

- Students know and use modern data analytics & econometrics tools for decision-focused causal & predictive empirical studies.
- Students apply suitable advanced data analytics causal estimators.
- Students apply suitable advanced data analytics predictive estimators and code such estimators in GAUSS. While such issues have already been discussed in Data Analytics 2, here we substantially extend the relevant set of empirical methods.

##### Course content

Nonlinear models with specific structure: Discrete Choice, Count, Duration (parametric & machine/statistical learning estimation).

Semiparametric methods for estimation of causal effects under unconfoundedness (semiparametric & machine learning estimation).

Additional machine learning methods for prediction.

##### Course structure

The course consists of 7 lectures, 5 PC project sessions (contact studies), and a self-studies part. In the contact studies part relevant methods are discussed and applied to particular empirical problems. In the self-studies part, estimators are coded in GAUSS.

##### Course literature

Wooldridge: The Econometrics of Cross-sectional and Panel Data.

Cameron & Trivedi: Microeconometrics.

Efron & Hastie: Computer Age Statistical Inference.

Hastie, Tibshirani, Friedman: The Elements of Statistical Learning.

Hastie, Tibshirani, Wainwright: Statistical Learning with Sparsity.



## Additional course information

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## Examination information

### Examination sub part/s

#### 1. Examination sub part (1/3)

##### Examination time and form

Central - Written examination (60%, 60 mins.)

##### Remark

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##### Examination-aid rule

Open Book

Students are free to choose aids but will have to comply with the following restrictions:

- At such examinations, all the pocket calculators of the Texas Instruments **TI-30 series** are admissible. Any other pocket calculator models 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 electronic dictionaries, notebooks, tablets, PDAs, mobile telephones and others, are inadmissible.
- Students are themselves responsible for the procurement of examination aids.

##### Supplementary aids

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##### Examination languages

Question language: English

Answer language: English

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#### 2. Examination sub part (2/3)

##### Examination time and form

Decentral - examination paper written at home (individual) (15%)

##### Remark

PC projects

##### 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. (2017), *Lern- und Arbeitsstrategien* (12th ed., Cornelsen Schweiz).
- 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. (2018), *Juristisches Arbeiten: Eine Anleitung für Studierende* (6. 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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## 3. Examination sub part (3/3)

### Examination time and form

Decentral - Group examination paper with presentation (all given the same grades) (25%)

### Remark

Self-studies

### 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. (2017), *Lern- und Arbeitsstrategien* (12th ed., Cornelsen Schweiz).
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## Supplementary aids

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## Examination languages

Question language: English

Answer language: English

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## Examination content

Microeconometrics methods and their suitable application (incl. some machine learning methods).

Coding estimators and empirical procedures in GAUSS.

## Examination relevant literature

Wooldridge: *The Econometrics of Cross-sectional and Panel Data*. Cameron & Trivedi: *Microeconometrics*. Efron & Hastie: *Computer Age Statistical Inference*. Other selected chapters and papers.



### Please note

Please note that this fact sheet alone is binding and has priority over any other information such as StudyNet (Canvas), personal databases or faculty members' websites and information provided in their lectures, etc.

Any possible references and links within the fact sheet to information provided by third parties are merely supplementary and informative in nature and are outside the University of St.Gallen's scope of responsibility and guarantee.

Documents and materials that have been submitted no later than the end of term time (CW21) are relevant to central examinations.

Binding nature of the fact sheet:

- Information about courses and examination time (central/decentral) and examination type starting from the beginning of the bidding on 23 January 2020
- Information about examinations (examination aid regulations, examination content, examination-relevant literature) for decentral examinations after the 4th semester week on 16 March 2020
- Information about examinations (examination aid regulations, examination content, examination-relevant literature) for central examinations as from the starting date for examination registration on 6 April 2020

Please consult the fact sheet again after these deadlines have expired.