



Course and Examination Fact Sheet: Spring Semester 2021

8,312: Microeconometrics

ECTS credits: 4

Overview examination/s

(binding regulations see below)

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

Examination time: inter-term break

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

Examination time: term time

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

Examination time: term time

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 I& II.

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 Python. While such issues have already been discussed in Data Analytics II, 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 Lab 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 Python.

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

In case of the President's Board having to implement new directives due to the SARS-CoV-2 pandemic in SpS2021, the course information listed above will be changed as follows:

- The course is conducted online via Zoom;
- The recordings of the course are available for 30 days;
- The lecturer informs via StudyNet on the changed implementation modalities of the course.

The examination information listed below would be changed as follows:

- The presentations are conducted online;
- There are no changes for all other examination information.

Examination information

Examination sub part/s

1. Examination sub part (1/3)

Examination time and form

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

Examination time: inter-term break

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:

- All the pocket calculators that are not of the Texas Instruments TI-30 series are explicitly 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, 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

2. Examination sub part (2/3)

Examination time and form

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

Examination time: term time

Remark

Labs

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 which is a published template in StudentWeb.

The documentation of sources (quotations, bibliography) has to be done throughout and consistently in accordance with the chosen citation standard such as APA or MLA.

For papers in law, the legal standard is recommended (by way of example, cf. FORSTMOSER, P., OGOREK R. et SCHINDLER B., *Juristisches Arbeiten: Eine Anleitung für Studierende*, newest edition respectively, or according to the recommendations of the Law School).

The indications of the sources of information taken over verbatim or in paraphrase (quotations) must be integrated into texts 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., *Lern- und Arbeitsstrategien*, newest edition respectively).

For any work written at the HSG, the indication of the page numbers is mandatory independent of the chosen citation standard. 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.

Supplementary aids

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Examination languages

Question language: English

Answer language: English

3. Examination sub part (3/3)

Examination time and form

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

Examination time: term time

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 which is a published template in StudentWeb.

The documentation of sources (quotations, bibliography) has to be done throughout and consistently in accordance with the chosen citation standard such as APA or MLA.

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Supplementary aids

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Examination languages

Question language: English



Answer language: English

Examination content

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

Coding estimators and empirical procedures in Python.

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 only this fact sheet and the examination schedule published at the time of bidding are binding and takes precedence over other information, such as information on StudyNet (Canvas), on lecturers' websites and information in lectures etc.

Any references and links to third-party content within the fact sheet are only of a supplementary, informative nature and lie outside the area of responsibility of the University of St.Gallen.

Documents and materials are only relevant for central examinations if they are available by the end of the lecture period (CW21) at the latest. In the case of centrally organised mid-term examinations, the documents and materials up to CW 12 are relevant for testing.

Binding nature of the fact sheets:

- Course information as well as examination date (organised centrally/decentrally) and form of examination: from bidding start in CW 04 (Thursday, 28 January 2021);
- Examination information (regulations on aids, examination contents, examination literature) for decentralised examinations: in CW 12 (Monday, 22 March 2021);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 12 (Monday, 22 March 2021);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised examinations: two weeks before the end of the registration period in CW 14 (Thursday, 8 April 2021).