University of St.Gallen

Course and Examination Fact Sheet: Spring Semester 2024

8,312: Microeconometrics

ECTS credits: 4

Overview examination/s
(binding regulations see below)
central - Analog written examination, Analog, Individual work individual grade (60%, 90 mins.)
Examination time: Lecture-free period
decentral - Written work, Digital, Group work group grade (25%)
Examination time: Term time
decentral - Written work, Digital, Individual work individual grade (15%)
Examination time: Term time

Attached courses
Timetable -- Language -- Lecturer
8,312,1.00 Microeconometrics -- English -- 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.

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.
- While related topics have already been discussed in Data Analytics II, here we substantially extend the relevant set of empirical methods.

Course structure and indications of the learning and teaching design
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.

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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 modalities

Examination type	Analog written examination
Responsible for organisation	central
Examination form	Written exam
Examination mode	Analog
Time of examination	Lecture-free period
Examination execution	Synchronous
Examination location	On Campus
Grading type	Individual work individual grade
Weighting	60%
Duration	90 mins.

Examination languages
Question language: English
Answer language: English

Remark
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Examination-aid rule
Open Book

Students are free to choose aids, apart from the following restrictions:

- pocket calculator models which are not part of the Texas Instruments TI-30 series, as well as any programmable electronic devices that are capable of communication such as electronic dictionaries, notebooks, tablets, smartphones, headsets, additional screens, etc. are not admissible;

- there is an option for faculty members to explicitly define exceptions under supplementary aids.

Procuring any aids, as well as ensuring their working order, is the exclusive responsibility of students.

Supplementary aids
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2. Examination sub part (2/3)

Examination modalities

Examination type	Written work
Responsible for organisation	decentral
Examination form	Written work
Examination mode	Digital

Time of examination	Term time
Examination execution	Asynchronous
Examination location	Off Campus
Grading type	Group work group grade
Weighting	25%
Duration	--

Examination languages
Question language: English
Answer language: English

Remark
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Examination-aid rule
Free aids provision

Basically, students are free to choose aids. Any restrictions are defined by the faculty members in charge of the examination under supplementary aids.

Supplementary aids
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3. Examination sub part (3/3)

Examination modalities

Examination type	Written work
Responsible for organisation	decentral
Examination form	Written work
Examination mode	Digital
Time of examination	Term time
Examination execution	Asynchronous
Examination location	Off Campus
Grading type	Individual work individual grade
Weighting	15%
Duration	--

Examination languages
Question language: English
Answer language: English

Remark
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Examination-aid rule
Free aids provision

Basically, students are free to choose aids. Any restrictions are defined by the faculty members in charge of the examination under supplementary aids.

Supplementary aids
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Examination content

The written exam (60%) covers microeconometrics methods and their suitable application (incl. some machine learning methods).

The individual examination paper (15%), requires students to solve the parts of empirical projects prior to the respective lab sessions.

The group examination (25%) consists in conducting an econometric study (self-study part).

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. Lecture slides.

Lecture slides.

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 13 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, 25 January 2024);
- Examination information (supplementary aids, examination contents, examination literature) for decentralised examinations: in CW 12 (Monday, 18 March 2024);
- Examination information (supplementary aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 13 (Monday, 25 March 2024);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised examinations: Starting with de-registration period in CW 15 (Monday, 08 April 2024).