Course Catalogue

for the Master’s Programme in Social and Economic Data Science

First Year/Second Year

Winter Semester 2020/2021

Version: 21/08/2020
Course Advice for Students of the Master's Programme in Social and Economic Data Science

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Dates of the Winter Semester 2020/2021

Welcome Programme for new Master’s students
Lectures begin: Monday, 26th October 2020, 13:30 – 14:30, D 434
Lecture-free period: Thursday, 24th December 2020 – Wednesday, 6th January 2021
Lectures end: Saturday, 13th February 2021

Registration period of the Department of Economics:

Seminar registration period for Winter Semester 2020: Tuesday, 30th June - Monday, 06th July 2020
Seminar registration period for Summer Semester 2021: Tuesday, 19th January – Monday, 25th January 2021
Exam Registration period: Tuesday, 19th January – Monday, 25th January 2021
Examination period I: Wednesday, 10th February – Saturday, 28th February 2021
Exam Registration period II: Tuesday, 16th March – Monday, 22nd March 2021
Examination period II: Saturday, 27th March – Saturday, 17th April 2021


Registration period of the Department of Politics and Public Administration:

Exam and Seminar Registration period I: t.b.a.
Registration period II: t.b.a.
Examination Dates: https://www.polver.uni-konstanz.de/service/formalitaeten/fristen-und-termine/
Exam Registration Periods of the Department of Computer and Information Science

Registration: Via ZEuS or with the offline-registration-form within the registration period
Reg. Period II (lectures): t.b.a.
Examination dates, etc: https://www.informatik.uni-konstanz.de/en/service-and-support/examinations/exam-registration/

Exam Registration Periods of the Department of History and Sociology

Registration period (ZEuS): Summer semester: 01st May – 15th June
Winter semester: 01st December – 15th January
https://www.soziologie.uni-konstanz.de/en/study/ba-sociology/study-organisation/deadlines/

Exam Registration Periods of the Department of Mathematics and Statistics

Registration: Students can apply up to one week before the exam.
Examination office: www.mathematik.uni-konstanz.de/beratung-und-service/pruefungsverwaltung/

Exam Registration Periods of the Department of Psychology

Examination dates: t.b.a.
https://www.psychologie.uni-konstanz.de/studieren/pruefungen-krankheit/
Examination office (Serpil Hummel): https://www.psychologie.uni-konstanz.de/beratung-und-service/ansprechpartner/
PREPARATION COURSES for new master’s students  
(free of charge)

Department of Economics:

PREP 1: Advanced Econometrics (Duration: 5 days, online) W. Pohlmeier
October 2020, dates t.b.a.
See here

PREP 2: Quantitative Methods in Economics (Duration: 5 days, online) J. Alasalmi
Thursday, 1/10/20, 14:00 - 14:30, Intro
Monday, 12/10/20, 14:00 - 15:30, Q&A meeting
Tuesday, 20/10/20, 14:00 - 15:30, Q&A meeting
Monday, 26/10/20, 14:00 - 15:30, Q&A meeting
Friday, 30/10/20, 14:00 - 15:30, Q&A meeting
See here

Department of Computer Sciences:

Kompaktkurs Mathematik 1 (Duration: 5 days, online, German only) N. Willenborg
Monday, 19/10/20, 13:00 – 16:00
Tuesday, 20/10/20, 10:00 – 16:00
Wednesday, 21/10/20, 10:00 – 16:00
Thursday, 22/10/20, 10:00 – 13:30, findet voraussichtlich in Präsenz statt, A 600
Friday, 23/10/20, 10:00 – 16:00
See ZEuS
First Semester

1. Introduction to Computational Methods for the Social Sciences

Introduction to Computation for the Social Sciences (9 ECTS)  t.b.a.
Wednesday, 10:00 – 11:30, D 434
Tutorial:
Friday, 10:00 – 11:30, E 404

Please note: In preparation for “Introduction to Computation for the Social Sciences” we advise all new MSc SEDS Students to take the Python Block Course in October (see page 8).

2. Foundations of Data Science

Computer Science

Data Mining: Basic Concepts (6 ECTS)  J. Fuchs / D. Keim
Thursday, 11:45 – 13:15, A 701 or online
Tutorial:
Group A: Monday, 10:00 – 11:30, H 306 or online
Group B: Monday, 13:30 – 15:00, A 704 or online
Group C: Tuesday, 15:15 – 16:45, Y 311 or online

The course “Data Visualisation: Basic Concepts” will be offered during the summer semester.

Konzepte der Informatik (6 ECTS)  B. Pampel
Monday, 10:00 – 11:30, online
Tuesday, 10:00 – 11:30, online
Tutorial:
Six groups, see ZEUS

Only in combination with

Programmierkurs I (Imperative Sprache) (6 ECTS)  J. Fuchs
Tuesday, 13:30 – 15:00, online
Tutorial:
Six groups, see ZEuS
Mathematics

Diskrete Mathematik und Logik (9 ECTS)  
S. Kosub
Wednesday, 10:00 – 11:30, online  
Thursday, 10:00 – 11:30, online

Tutorial:
Six groups, see ZEuS

Lineare Algebra I (6+3 ECTS)  
C. Scheiderer

Tutorial: t.b.a.

Mathematik für Wirtschaftswissenschaftler I (9 ECTS)  
J. Schropp
Thursday, 08:15 – 09:45, A 600  
Friday, 11:45 – 13:15, A 600

Tutorial:  
15 Groups, see ZEuS

Datenmathematik (9 ECTS)  
S. Kosub
Tuesday, 15:15 – 16:45, online  
Thursday, 13:30 – 15:00, online

Tutorial:
4 Groups, see ZEuS

Social Science Methods

Introduction to Survey Methodology (6+3 ECTS)  
P. Selb
Thursday, 11:45 – 13:15, t.b.a.

Tutorial:
t.b.a.

Research Design I: Research Design and Causal Inference (9 ECTS)  
P. Selb
Tuesday, 11:45 – 13:15, t.b.a.

Empirical Research Methods (9 ECTS)  
S. Shikano
Tuesday, 15:15 – 16:45, t.b.a.  
Wednesday, 10:00 - 11:30, t.b.a.

Empirie: Quantitative Methoden (6 ECTS)  
B. Combet
Thursday, 11:45 – 13:15, online

Tutorial:
5 groups, see ZEuS

Methoden I (5 ECTS)  
UD. Reips
Monday, 13:30 – 15:00, online

Tutorial:
Monday, 15:15 - 16:45, online
Statistics

Statistik 1 (6 ECTS) Y. Shevchenko
Tuesday, 11:45 – 13:15, online

Tutorial:
Wednesday, 11:45 – 13:15, online
Third Semester

1. Advanced Methods: Computer Science

**Konzepte der Programmierung** (6 ECTS)  
M. Grossniklaus  
Tuesday, 08:15 – 09:45, online  
Wednesday, 08:15 – 09:45, online

Tutorial:  
4 Groups, see ZEuS

Only in combination with

**Programmierkurs III (Deklarative Sprache)** (6 ECTS)  
L. Wörteler  
Wednesday, 13:30 – 15:00, A 701

**Machine Learning and AI for Data Science** (6 ECTS)  
M. Berthold  
Tuesday, 17:00 – 18:30, online  
Thursday, 17:00 – 18:00, online

2. Advanced Methods: Statistics

**Advanced Econometrics** (10 ECTS)  
W. Pohlmeier  
Wednesday, 08:15 – 09:45, online until Christmas then Tuesday, 11:45 – 13:15, A 701  
Friday, 08:15 – 09:45, online until Christmas then A 701

Please note: the tutorials take place before the first lecture!

Tutorial:  
Group A:  
Monday, 15:15 – 16:45, online until Christmas then D 434, begins 02/11/2020

Group B:  
Monday, 08:15 – 09:45, online until Christmas then t.b.a., begins 02/11/2020

**Statistical Learning** (5 ECTS)  
L. Grigoryeva  
t.b.a.  
Prerequisite: “Machine Learning”

3. Programming and Scripting

**Python Block Course** (6 ECTS) – 5 days  
t.b.a.  
October 2020, 26/10/20 – 30/10/20, online

Please note:  
This course is recommended as preparation for “Introduction to Computation for the Social Sciences”. Details about the registration for this course will be available in due course.
4. Social Science Applications

Web Data Collection with R (7 ECTS, Dept. Politics and Public Admin.)
Wednesday, 11:45 – 13:15, t.b.a.
S. Göbel

Wahlsystemforschung (6 ECTS, Dept. Politics and Public Admin.)
Tuesday, 11:45 – 13:15, t.b.a.
S. Shikano

The Political Economy of Electoral Accountability
(6 ECTS, Dept. Politics and Public Admin.)
Thursday, 13:30 – 15:00, t.b.a.
S. Köhler

Internet Control in Autocracies
(6 ECTS, Dept. Politics and Public Admin.)
Tuesday, 13:30 – 15:00, t.b.a.
E. Keremoglu-Waibler

People Analytics and Evidenzbasiertes Personalmanagement
(6 ECTS, Dept. Politics and Public Admin.)
Monday, 11:45 – 13:15, t.b.a.
U. Leicht-Deobald

Create Internet-based experiments, conduct Big Data research,
write articles (4 ECTS, Dept. Psychology) – 4 days
Monday, 26/10/2020, 11:00 – 17:00, C 336
Tuesday, 27/10/2020, 11:00 – 17:00, C 336
Wednesday, 28/10/2020, 11:00 – 17:00, C 336
Friday, 05/02/2021, 13:30 – 18:00, E 404
U. Reips

All seminars listed above are examples for seminars for the Module Social Science Applications. But as usual it is up to every SEDS student to search in ZEuS for other seminars/lectures that can be recognised within the Advanced Modules.

For questions regarding seminars/lectures please proceed as follows:
- Check if the seminar/lecture is listed in the MSc SEDS Additional Course /Seminar list
- Send an email to the Principal Investigator of the participating Department to clarify if the seminar/lecture is suitable in one of the advanced modules.

Please note: Because of the Covid-19 situation we highly recommend contacting the lecturers of the seminars prior to the start of the semester to make sure that there are spots for MSc SEDS students available.
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<td>Mathematik für Wirtschaftswissenschaftler I (L) / Schropp</td>
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<td>Konzepte der Informatik (L) / Pampel</td>
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<td>Advanced Econometrics (T) / Pohlmeier Group B</td>
<td>Konzepte der Programmierung (L) / Grossniklaus</td>
<td>Advanced Econometrics (L) / Pohlmeier</td>
<td>Data Analysis with R (S) / Herrmann</td>
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