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

Summer Semester 2021

Version: 17/03/2021
Course Advice for Students of the 
Master's Programme in Social and Economic Data Science

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Anna Bahß
Email: seds.msc@uni-konstanz.de

Dates of the Summer Semester 2021

Lectures begin: Monday, 12th April 2021
Lectures end: Saturday, 24th July 2020 (Dept. of Economics: 17/07/21)

Registration period of the Department of Economics:

Exam registration period: 29th June – 5th July 2021
Examination period I: 15th July – 8th August 2021

Exam registration period: 14th September – 20th September 2021
Examination period II: 7th October – 31st October 2021

Registration periods of the Department of Politics and Public Administration:

Exam registration period I: 01st May – 16th June 2021
Exam registration period II: 11th September – 16th September 2021
Exam Registration Periods of the Department of Computer and Information Science

tba
See here: 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): 1st May – 15th June 2021

Exam Registration Periods of the Department of Mathematics and Statistics

Registration: Students are able to apply via ZEuS up to seven days before the exam.

Exam Registration Periods of the Department of Psychology

Registration period: 1st of June 2021 – 30th of June 2021

Dates of the Winter Semester 2021/22

Lectures begin: Monday, 25th October 2021
Lecture-free period: 24th December 2021 – 6th January 2022
Lectures end: Saturday, 12th February 2022
1. Foundations of Data Science

Focus Area: Computer Sciences

**Data Visualization: Basic Concepts**, 2+2 hours (6 ECTS)  
D. Keim  
Tuesday, 10:00 – 11:30  
See: ZEuS

Tutorial:  
Group I: Wednesday, 15:15 – 16:45  
Group II: Thursday, 13:30 – 15:00  
Group III: Thursday, 15:15 – 16:45  
See: ZEuS

**Konzepte der Informatik**, 4+2 hours (6 ECTS)  
B. Pampel  
Monday, 10:00 - 11:30  
Tuesday, 10:00 – 11:30  
(recorded lectures on ILIAS)  
See: ZEuS

Tutorials:  
Group I: Friday, 08:15 – 09:45  
Group II: Friday, 10:00 – 11:30  
Group III: Friday, 11:45 – 13:15  
See: ZEuS

**Only in combination with:**  
**Programmierkurs I**, 2+2 hours (6 ECTS)  
J. Fuchs  
Wednesday, 11:45 - 13:15 (registration via ILIAS mandatory)  
See: ZEuS

Tutorials:  
Group I: Wednesday, 13:30 – 15:00  
Group II: Wednesday, 15:15 – 16:45  
Group III: Wednesday, 17:00 – 18:30  
Group IV: Friday, 10:00 – 11:30  
Group V: Friday, 13:30 – 15:00  
See: ZEuS

Focus Area: Mathematics

**Analysis und Lineare Algebra**, 4+2 hours (9 ECTS)  
S. Kosub  
Wednesday, 10:00 - 11:30  
Thursday, 10:00 - 11:30  
See: ZEuS

Tutorials:  
Group I: Thursday, 11:45 – 13:15  
Group II: Thursday, 13:30 – 15:00  
Group III: Thursday, 17:00 – 18:30  
Group IV: Friday, 10:00 – 11:30  
Group V: Friday, 13:30 – 15:00  
See: ZEuS
Focus Area: Social Scientific Methods

**Econometrics I**, 3+2 hours (8 ECTS)  
Tuesday, 17:00 - 18:30 (Q&A Tutorial)  
Thursday, 08:15 - 09:45 (Q&A Lecture)  
See: [ZEuS](#)

Tutorials:  
Group I: Monday, 11:45 – 13:15  
Group II: Tuesday, 08:15 – 09:45  
Group III: Wednesday, 10:00 – 11:30  
Group IV: Thursday, 15:15 – 16:45  
Group V: Friday, 10:00 – 11:30  
See: [ZEuS](#)

**Methoden 2**, 2 hours (5 ECTS)  
Monday, 13:30 – 15:00  
See: [ZEuS](#)

Focus Area: Statistics

**Statistics I** (Dept. of Economics), 2+2 hours (6 ECTS)  
Tuesday, 11:45 – 13:15  
See: [ZEuS](#)

9 Tutorials, for time and room see [ZEuS](#)

**Statistik** (Dept. of Sociology), 2+2 hours (7 ECTS)  
Monday, 10:00 – 11:30, See: [ZEuS](#)  
Exercise: Tuesday, 10:00 – 11:30, See: [ZEuS](#)

Tutorials:  
Group I: Wednesday, 10:00 – 11:30  
Group II: Wednesday, 13:30 – 15:00  
Group III: Wednesday, 15:15 – 16:45  
Group IV: Thursday, 10:00 – 11:30  
Group V: Friday, 10:00 – 11:30  
See: [ZEuS](#)

**Statistics** (Dept. of Political Science), 2+2 hours, (9 ECTS)  
Tuesday, 15:15 – 16:45  
Wednesday, 10:00 – 11:30  
See: [ZEuS](#)

2. Advanced Methods: Computer Science

**Big Data Management and Analysis**, 2+2 hours (6 ECTS)  
Wednesday, 08:15 – 9:45 (also subscribe on ILIAS!)  
See: [ZEuS](#)

Tutorial:  
Wednesday, 10:00 – 11:30  
See: [ZEuS](#)
Algorithmen und Datenstrukturen, 4+2 hours (9 ECTS)  
S. Storandt
Monday, 15:15 – 16:45  
Tuesday, 10:00 – 11:30  
See: ZEuS

Tutorials:
Group I: Thursday, 13:30 – 15:00  
Group II: Friday, 10:00 – 11:30  
Group III: Friday, 11:45 – 13:15  
See: ZEuS

Only in combination with:
Programmierkurs II, 2 hours (3 ECTS)  
S. Storandt
Tuesday, 15:15 – 16:45  
See: ZEuS

Datenbanksysteme, 4+2 hours (9 ECTS)  
M. Scholl
Monday, 13:30 – 15:00  
Tuesday, 13:30 – 15:00  
See: ZEuS

Tutorials:
Group I: Wednesday, 13:30 – 15:00  
Group II: Wednesday, 17:00 – 18:30  
Group III: Friday, 08:15 – 09:45  
Group IV: Friday, 11:45 – 13:15  
Group IV: Friday, 13:30 – 15:00  
See: ZEuS

Document Analysis: Computational Methods, 2 + 2 (6 ECTS)  
AG Keim
Thursday, 11:45 – 13:15  
See: ZEuS

Tutorial:
Group I: Monday, 10:00 – 11:30  
Group II: Tuesday, 11:45 – 13:15  
Group III: Wednesday, 13:30 – 15:00  
See: ZEuS

Graph Data Management and Analysis, 2 + 2 hours (6 ECTS)  
M. Grossniklaus / T. Chondrogiannis
Wednesday, 11:45 – 13:15 (online, flipped classroom)  
See: ZEuS

Machine-Learning with Kernels, 2 + 2 hours (6 ECTS)  
M. Rupp
Tuesday, 11:45 – 13:15  
See: ZEuS

Tutorial:
Thursday, 15:15 – 16:45  
See: ZEuS
3. Advanced Methods: Statistics

Probability Theory and Statistical Inference, 2 + 2 hours (8 ECTS)  L. Grigoryeva
The lecture will be online. Videos will be provided via ILIAS.
See: ZEuS

Tutorial:
Monday, 08:15 – 09:45 (bi-weekly)
See: ZEuS

Research Design II: Statistical Modelling and Inference  M. Herrmann
in Quantitative Research
Thursday, 10:00 – 11:30
See: ZEuS

Applied Time Series Analysis, 3+1 hours (8 ECTS)  R. Brüggemann
Monday, 11:45 – 13:15
See: ZEuS

Tutorial: Friday, 11:45 – 13:15
See: ZEuS

Machine Learning, 3 hours (6 ECTS)  L. Grigoryeva
Monday, 15:15 – 16:45
Monday, 17:00 – 18:30 (bi-weekly)
See: ZEuS

4. Programming and Scripting

Programmierkurs I, 2+2 hours (6 ECTS)  J. Fuchs
Wednesday, 11:45 - 13:15 (registration via ILIAS mandatory)
See: ZEuS

Tutorials:
Group I: Wednesday, 13:30 – 15:00
Group II: Wednesday, 15:15 – 16:45
Group III: Wednesday, 17:00 – 18:30
See: ZEuS

Programmierkurs II, 2 hours (3 ECTS)  S. Storandt
Tuesday, 15:15 – 16:45
See: ZEuS

5. Social Science Applications

Research based seminar offered for MSc SEDS Students:
Title and timeslots t.b.a., 2+2 hours,
9 ECTS (6 ECTS to be recognised in the module Social Science Applications,
3 ECTS to be recognised in the module Programming and Scripting)
Dept. of Computer Science:

**Master’s Seminar Data Analysis and Visualization**, 2 hours (3 ECTS) AG Keim
Monday, 15:15 – 16:45
See: [ZEuS](#)

**Master’s Seminar Data and Information Mining**, 2 hours (3 ECTS) AG Spitz
Seminar theme (Summer 2021): “Ethical Implications of Machine Learning and Data Science”
Monday, 13:30 – 15:00
See: [ZEuS](#)

**Databases and Information Systems**, 2 hours (3 ECTS) M. Grossniklaus
Monday, 15:15 – 16:45
See: [ZEuS](#)

**Master’s Seminar Algorithmics**, 2 hours (4 ECTS) S. Storandt
Monday, 8:15 – 9:45
See: [ZEuS](#)

Dept. of Psychology:

**Blockseminar: Internet-based Data Collection and Analysis**, (6 ECTS) U. Reips
room tba (on campus if regulations allow)
Monday, 13th September: 11:00 – 18:00
Tuesday, 14th September: 10:00 – 22:00
Wednesday, 15th September: 10:00 – 21:00
Thursday, 16th September: 10:00 – 21:00
Friday, 17th September: 11:00 – 18:00
See: [ZEuS](#)
MSc SEDS students are allowed to take part if spots are available.
Contact: Prof. U. Reips (reips@uni-konstanz.de)
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<td>10:00 – 11:30</td>
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<td>• Konzepete der Informatik (L) / Pampel&lt;br&gt;• Data Visualization: Basic Concepts (L) / Keim&lt;br&gt;• Statistik (Dept. of Sociology, E) / Buis</td>
<td>• Analysis und Lineare Algebra (L) / Kosub&lt;br&gt;• Statistics (Dept. of Political Science, L) / Shikano</td>
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