Subject to change in conjunction with the move to online teaching. Check the lecturers’ websites for updates!

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

Summer Semester
2020

Version: 15/04/2020
Course Advice for Students of the
Master's Programme in Social and Economic Data Science

Alexandra Morris
Room F 264
Tel.: (07531) 88-4494
Fax: (07531) 88-5193
E-mail: Alexandra.Morris@uni-konstanz.de
Website: www.uni-konstanz.de/seds
Office Hours: Tuesday, Thursday, 10:00 – 12:00

Student Course Guidance:
Roberto Cadili
Email: seds.msc@uni-konstanz.de

Dates of the Summer Semester 2020

Lectures begin: Monday, 20th April 2020 (Political Science Dept.: 27/04/20)
Lectures end: Saturday, 11th July 2020 (Dept. of Economics)

Registration period of the Department of Economics:

Exam registration period: 23rd June – 29th June 2020
Examination period I: 9th July – 1st August 2020

Exam registration period: 15th September – 21st September 2020
Examination period II: 8th October – 31st October 2020

Seminar registration period for
Winter Semester 2020/21: 23rd June – 29th June 2020

Registration periods of the Department of Politics and Public Administration:

Exam registration period I: 01st May – 15th June 2020
Exam registration period II: 11th September – 16th September 2020
Exam Registration Periods of the Department of Computer and Information Science

Registration: Via ZEuS

Registration periods:

Please check the exam registration website regularly.

Exam Registration Periods of the Department of History and Sociology

Registration period (StudIS): 1st May – 15th June 2020

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 2020 – 30th of June 2020

Dates of the Winter Semester 2020/21

Lectures begin: Monday, 26th October 2020
Lecture-free period: 24th December, 2020 – 6th January, 2021
Lectures end: Saturday, 13th February 2021
1. Foundations of Data Science

Focus Area: Computer Sciences

**Data Visualization: Basic Concepts**, 2+2 hours (6 ECTS)  
D. Keim  
Tuesday, 11:45 – 13:15, R 512  
Tutorials:  
Group I: Wednesday, 11:45 – 13:15, D 247  
Group II: Thursday, 11:45 - 13:15, D 247

**Konzepte der Informatik**, 4+2 hours (6 ECTS)  
B. Pampel  
Monday, 10:00 - 11:30, A 702  
Tuesday, 10:00 – 11:30, A 702  
Tutorials:  
Group I: Thursday, 13:30 - 15:00, D 436  
Group II: Thursday, 15:15 – 16:45, D 433

Only in combination with:  
**Programmierkurs I**, 2+2 hours (6 ECTS)  
J. Fuchs  
Wednesday, 11:45 - 13:15, A 702  
Tutorials:  
Group I: Wednesday, 17:00 – 18:30, P 602  
Group II: Thursday, 11:45 – 13:15, P 602  
Group III: Thursday, 17:00 – 18:30, P 603

Focus Area: Mathematics

**Analysis und Lineare Algebra**, 4+2 hours (9 ECTS)  
S. Kosub  
Wednesday, 10:00 - 11:30, R 513  
Thursday, 10:00 - 11:30, R 513  
5 Tutorials, for time and room see: ZEuS

Focus Area: Social Scientific Methods

**Econometrics I**, 4+2 hours (8 ECTS)  
W. Pohlmeier  
Thursday, 08:15 - 09:45, A 701  
Friday, 08:15 - 09:45, A 701  
7 Tutorials, for time and room see: ZEuS

**Methoden 2**, 2 hours (5 ECTS)  
U. Reips  
Monday, 13:30 – 15:00, R 711
Focus Area: Statistics

Statistics I (Dept. of Economics), 2+2 hours (6 ECTS) R. Brüggemann
Friday, 10:00 – 11:30, R 711
9 Tutorials, for time and room see ZEuS

Statistics (Dept. of Politics and Public Administration), 4 hours (9 ECTS) S. Shikano
Tuesday, 15:15 – 16:45, A 600
Wednesday, 10:00 - 11:30, R 711

Statistik (Dept. of Sociology), 2+2 hours (7 ECTS) M. Buis
Monday, 10:00 – 11:30, M 629
5 Tutorials, for time and room see: ZEuS

2. Advanced Methods: Computer Science

Big Data Management and Analysis, 2+2 hours (6 ECTS) M. Grossniklaus
Wednesday, 8:15 – 9:45, L 602
Tutorial: Wednesday, 10:00 – 11:30, L 602

Algorithmen und Datenstrukturen, 4+2 hours (9 ECTS) S. Storanad
Monday, 10:00 – 11:30, A701
Tuesday, 10:00 – 11:30, A701
5 Tutorials, for time and room see: ZEuS

Only in combination with:
Programmierkurs II, 2 hours (3 ECTS) S. Storanad
Monday, 15:15 – 16:45, A 703

Datenbanksysteme, 4+2 hours (9 ECTS) M. Scholl
Monday, 13:30 – 15:00, A 701
Tuesday, 13:30 – 15:00, A 701
5 Tutorials, for room and time see: ZEuS

3. Advanced Methods: Statistics

Probability Theory and Statistical Inference, 2+2 hours (9 ECTS) L. Grigoryeva
Monday, 8:15 – 9:45, C 424
Tutorial: Tuesday, 8:15 – 9:45, C 424
Applied Time Series Analysis, 3 hours (8 ECTS) R. Brüggemann
Monday, 11:45 – 13:15, D 436
Tutorial: Friday, 11:45 – 13:15, D 436 M.Daniele

Applied Econometrics and Machine Learning, 2+2 hours (8 ECTS) L. Grigoryeva/W. Pohlmeier
Monday, 15:15 – 16:45, D 406
Tuesday, 17:00 – 18:30, D 406
Tutorial: Monday, fortnightly, 17:00 – 18:30, D 406
This course is offered instead of Microeconometrics.

Research Design II: Statistical Modelling and Inference in Quantitative Research, 2+2 hours (9 ECTS) M. Hermann
Thursday, 10:00 – 11:30, A 704
Tutorials: tba

4. Programming and Scripting

Data Analysis with R, (7 ECTS) M. Herrmann
Friday, 08:15 – 09:45, BS 217

Datenanalyse mit R, (7 ECTS) M. Herrmann
Group A: Friday, 10:00 – 11:30, BS 217
Group B: Friday, 13:30 – 15:00, BS 217

Programmierkurs I, 2+2 hours (6 ECTS) J. Fuchs
Wednesday, 11:45 - 13:15, A 702
Tutorials:
Group I: Wednesday, 17:00 – 18:30, P 602
Group II: Thursday, 11:45 – 13:15, P 602
Group III: Thursday, 17:00 – 18:30, P 603

Programmierkurs II, 2 hours (3 ECTS) S. Storandt
Monday, 15:15 – 16:45, A 703

5. Social Science Applications

Neuere Theorien und Methoden der Wahlforschung, 2 hours (7 ECTS) S. Shikano
Tuesday, 10:00 – 11:30, D 432

Discursive Power, 2 hours (7ECTS) A. Jungherr
Thursday, 15:15 – 16:45, C 421

Methoden der Sozialwissenschaftlichen Textanalyse, 2 hours (7ECTS) A. Jungherr
Thursday, 17:00 – 18:30, D 430
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<thead>
<tr>
<th>Time</th>
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<td>8:15</td>
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<td>Econometrics I (L) / Pohlmeier</td>
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<td>Konzepte der Informatik (L) / Pampel</td>
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<td>Analysis and Lineare Algebra (L) / Kosub</td>
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<td>Data Visualization: Basic Concepts (L) / Keim</td>
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<td>Probability Theory and Statistical Inference (L) / Grigoryeva</td>
<td>Probability Theory and Statistical Inference (T) / Grigoryeva</td>
<td>Big Data Management and Analysis (L) / Grossniklaus</td>
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<td>Data analysis with R (L) / Herrmann</td>
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<td><strong>10:00 – 11:30</strong></td>
<td>Algorithmen und Datenstrukturen (L) / Storandt</td>
<td>Algorithmen und Datenstrukturen (L) / Storandt</td>
<td>Big Data Management and Analysis (T) / Grossniklaus</td>
<td>Research Design II (L) / Herrmann</td>
<td>Datenanalyse mit R (L) / Herrmann Group A</td>
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<td><strong>11:45 – 13:15</strong></td>
<td>Applied Time Series (L) / Brüggemann</td>
<td>Programmierkurs I (L) / Fuchs</td>
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<td>Applied Time Series (L/T) / Brüggemann / Daniele</td>
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<td><strong>13:30 – 15:00</strong></td>
<td>Datenbanksysteme (L) / Scholl</td>
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<td>Datenanalyse mit R (L) / Herrmann Group B</td>
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<td><strong>15:15 – 16:45</strong></td>
<td>Programmierkurs II (L) / Storandt</td>
<td>Applied Econometrics and Machine Learning (L) / Grigoryeva, Pohlmeier</td>
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<td>Discursive Power (S) / Jungherr</td>
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<td><strong>17:00 – 18:30</strong></td>
<td>Applied Econometrics and Machine Learning (T) / Grigoryeva</td>
<td>Applied Econometrics and Machine Learning (L) / Grigoryeva, Pohlmeier</td>
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<td>Methoden der Sozialwissenschaftlichen Textanalyse (S) / Jungherr</td>
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## PREVIEW WINTER SEMESTER 2020/21

1. **Introduction to Computational Methods for the Social Sciences**
   - N.N.

2. **Foundations of Data Analysis**

   **Focus Area: Computer Sciences**
   - Information Vizualisation, (6 ECTS) N.N.

   **Focus Area: Mathematics**
   - Diskrete Mathematik und Logik, (9 ECTS) N.N.
   - Datenmathematik, (9 ECTS) N.N.
   - Mathematik für Wirtschaftswissenschaftler, 4 + 2 hours (9 ECTS) N.N.
   - Lineare Algebra, 4 + 2 hours (9 ECTS) N.N.

   **Focus Area: Statistics**
   - Statistik I (Dept. of Psychology), 2 + 2 hours (6 ECTS) N.N.

   **Focus Area: Social Scientific Methods**
   - Introduction to Survey Methodology, 2 + 2 hours (9 ECTS) N.N.
   - Methoden der emp. Politik- und Verwaltungsforschung, 4 hours (9 ECTS) N.N.
   - Empirie: Quantitative Methoden, 2 + 2 hours (6/7 ECTS) N.N.
   - Research Design I, 2 + 2 hours (9 ECTS) N.N.
   - Methoden I, (5 ECTS) N.N.

2. **Advanced Methods: Computer Science**

   - Konzepte der Programmierung (6 ECTS) in combination with Programmierkurs III (6 ECTS)

3. **Advanced Methods: Statistics**

   - Advanced Econometrics, 3 + 2 hours (10 ECTS) N.N.
   - Advanced Time Series Analysis, (8 ECTS) N.N.

4. **Programming and Scripting**

   - Data Analysis with R, (7 ECTS) N.N.
   - Datenanalyse mit R, (7 ECTS) N.N.
   - Programmierkurs I, (6 ECTS) N.N.
   - Programmierkurs III, (6 ECTS) N.N.