Course Catalogue

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

First Year/Second Year

Winter Semester 2018/2019

Version: 19/10/2018
Course Advice for Students of the
Master's Programme in Social and Economic Data Science

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Dates of the Winter Semester 2018/2019

Welcome Programme for new Master’s students: Monday, 15th October 2018
Lectures begin: Monday, 22nd October 2018
Lecture-free period: Friday, 22nd December 2018 – Friday, 5th January 2019
Lectures end: Friday, 16th February 2019

Registration period of the Department of Economics:

Seminar registration period for Summer Semester 2019: Tuesday, 22nd January – Monday, 28th January 2019
Exam Registration period: Tuesday, 22nd January – Monday, 28th January 2019
Examination period I: Wednesday, 13th February – Saturday, 02nd March 2019
Exam Registration period II: Tuesday, 19th March – Monday, 25th March 2019
Examination period II: Saturday, 30th March – Thursday, 18th April 2019

Registration periods of the Department of Politics and Public Administration:

Exam registration period: 01/12/2018 – 15/01/2019
Exam registration period II: 16/03/2019 – 20/03/2019
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 StudIS or with the offline-registration-form within the registration period
Reg. Period I (lectures): 01/12/2018 – 04/02/2019
Reg. Period II (lectures): 18/03/2019 – 25/03/2019
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 (StudIS): Summer semester: 01\textsuperscript{st} May – 15\textsuperscript{th} June
Winter semester: 01\textsuperscript{st} December – 15\textsuperscript{th} January
https://www.geschichte.uni-konstanz.de/en/study/ma-history/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: https://www.psychologie.uni-konstanz.de/beratung-und-service/formulare-und-downloads/bachelor/
Examination office (Elke Stepczynski): https://www.psychologie.uni-konstanz.de/beratung-und-service/ansprechpartner/
PREPARATION COURSES for new master’s students  
(free of charge, no registration necessary)

Department of Economics:

PREP 1: Advanced Econometrics  
(Duration 5 days)  
A. Simmet

Wednesday, 10/10/2018, 13:30 – 16:45, room tba  
Thursday, 11/10/2018, 13:30 – 16:45, room tba  
Friday, 12/10/2018, 13:30 – 16:45, room tba  
Monday, 15/10/2018, 13:30 – 16:45, room tba  
Tuesday, 16/10/2018, 13:30 – 16:45, room tba

See ZEuS: https://zeus.uni-konstanz.de:443/hioserver/pages/startFlow.xhtml?_flowId=showEvent-flow&unitId=4001&termYear=2018&termTypeValueId=2&navigationPosition=studiesOffered%2CsearchCourses

Department of Computer Sciences:

Brückenkurs Mathematik  
(Duration 5 days, geman only)  
S. Kosub

See ZEuS: https://zeus.uni-konstanz.de:443/hioserver/pages/startFlow.xhtml?_flowId=showEvent-flow&unitId=4879&termYear=2018&termTypeValueId=2&navigationPosition=studiesOffered,searchCourses

Java Crash Course  
(Duration 3 days)  
F. Götz-Hahn

See ZEuS: https://zeus.uni-konstanz.de:443/hioserver/pages/startFlow.xhtml?_flowId=showEvent-flow&unitId=4879&termYear=2018&termTypeValueId=2&navigationPosition=studiesOffered,searchCourses
First Semester

1. Introduction to Computational Methods for the Social Sciences

Introduction to Computation for the Social Sciences (9 ECTS)  
K. Donnay  
Monday, 11:45 – 13:15, F 428  
Tutorial:  
K. Donnay  
Wednesday, 10:00 – 11:30, D 247

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 7 or:  
https://zeus.uni-konstanz.de:443/hioserver/pages/startFlow.xhtml?_flowId=showEvent-flow&unitId=18857&termYear=2018&termTypeValueId=2)

2. Foundations of Data Science

Computer Science

Information Visualization I (6 ECTS)  
D. Keim  
Monday, 13:30 – 15:00, C 358  
Tutorial:  
Thursday, 11:45 – 13:15, C 358

Data Mining: Basic Concepts (6 ECTS)  
J. Fuchs  
Tuesday, 15:15 – 16:45, R 511  
Tutorial:  
Thursday, 10:00 – 11:30, C 358  
t.b.a.

Analyse und Visualisierung von Informationen (9 ECTS)  
D. Keim  
Monday, 10:00 -11:30, A 702  
Tuesday, 13:30 – 15:00, R 511  
Tutorial:  
Wednesday, 13:30 – 15:00, M 630  
t.b.a.  
Please note: “Analyse und Visualisierung von Informationen” is an alternative for “Information Visualization I” and “Data Mining: Basic Concepts” (in german, last time during the wintersemester 2018/19):

Konzepte der Informatik (6 ECTS)  
B. Pampel  
Monday, 13:30 – 15:00, R 611  
Tuesday, 13:30 – 15:00, A 701  
Tutorial:  
Six groups, see ZEUS

Only in combination with

Programmierkurs I (6 ECTS)  
J. Fuchs  
Tuesday, 10:00 – 11:30, R 611  
Tutorial:  
Six groups, see ZEuS
Mathematics

Diskrete Mathematik und Logik (9 ECTS)  
S. Kosub  
Wednesday, 10:00 – 11:30, R 513  
Thursday, 10:00 – 11:30, R 513

Tutorial:  
Six groups, see ZEuS

Lineare Algebra I (6+3 ECTS)  
O. Schnürer  
Monday, 10:00 – 11:30, R 712  
Thursday, 10:00 -11:30, R 711

Tutorial: t.b.a.

Mathematik für Wirtschaftswissenschaftler I (9 ECTS)  
J. Schropp  
Monday, 08:15 – 09:45, A 600  
Thursday, 10:00 – 11:30, A 600

Tutorial:  
15 Groups, see ZEUS

Social Science Methods

Introduction to Survey Methodology (6 + 3 ECTS)  
P. Selb  
Thursday, 11:45 – 13:15, A 702

Tutorial:  
Wednesday, 11:45 – 13:15, E 402

Research Design I: Research Design and Causal Inference (9 ECTS)  
P. Selb  
Tuesday, 11:45 – 13:15, R 712

Empirical Research Methods (9 ECTS)  
S. Shikano  
Tuesday, 17:00 – 18:30, A 600  
Wednesday, 10:00 – 11:30, A 600

Empirie: Quantitative Methoden I (6 ECTS)  
T. Hinz  
Monday, 15:15 – 16:45, M 629

Tutorial:  
5 groups, see ZEuS

Methoden I (5 ECTS)  
UD. Reips  
Monday, 13:30 – 15:00, R 711  
Monday, 15:15 - 16:45, R 711

Statistics

Statistik I (6 ECTS)  
V. Véteinsdóttir  
Tuesday, 11:45 – 13:15, R 513

Tutorial:  
Wednesday, 11:45 – 13:15, R 513
Third Semester

1. Advanced Methods: Computer Science

Algorithmen und Datenstrukturen and Programmierkurs III (9+6 ECTS)  
F. Schreiber  
Monday, 15:15 – 16:45, A 702  
Tuesday, 15:15 – 16:45, A 702  
Tutorial:  
4 groups, see ZEuS

Programmierkurs III  
M. Waldvogel  
Friday, 13:30 – 15:00, R 712  
Tutorial:  
2 groups, see ZEU

2. Advanced Methods: Statistics

Advanced Econometrics (10 ECTS)  
W. Pohlmeier  
Wednesday, 08:15 – 09:45, A 704  
Friday, 08:15 – 09:45, A 704  
Tutorial:  
3 groups, see ZEuS

Advanced Time Series Analysis (8 ECTS)  
R. Brüggemann  
Monday, 10:00 – 11:30, F 425  
Friday, 08:15 – 09:45, F 425  
Tutorial:  
Friday: 08:15 – 09:45, F 425  
R. Braun

3. Programming and Scripting

Python Block Course (6 ECTS)  
A. Berg / MP. King  
Monday, 15/10/2018, 10:00 – 13:15, G 309  
Tuesday, 16/10/2018, 10:00 – 13:15, G 309  
Wednesday, 17/10/2018, 10:00 – 13:15, G 309  
Thursday, 18/10/2018, 10:00 – 13:15, G 309  
Friday, 19/10/2018, 10:00 – 13:15, G 309  
Monday, 26/11/2018, 10:00 – 11:30, L 829

Please note:  
This course is recommended as preparation for "Introduction to Computation for the Social Sciences". The obligatory registration for this course will be open in ZEuS from 01/09/2018 – 10/10/2018.

Introduction to Visualization with D3 (3 ECTS)  
K. Donnay/  
Monday, 22/10/2018, 10:00 – 11:30, L 829  
L. Abdullayeva  
Monday, 29/10/2018, 10:00 – 11:30, L 829  
Monday, 05/11/2018, 10:00 – 11:30, L 829  
Monday, 12/11/2018, 10:00 – 11:30, L 829  
Monday, 19/11/2018, 10:00 – 11:30, L 829  
Monday, 26/11/2018, 10:00 – 11:30, L 829
Data Analysis with R (7 ECTS)  
Thursday, 08:15 – 09:45, BS 217  
M. Herrmann

Datenanalyse mit R (7 ECTS)  
Thursday, 10:00 – 11:30, BS 217  
M. Herrmann

Programmierkurs I (6 ECTS)  
Tuesday, 10:00 – 11:30, R 611  
Tutorial:  
Six groups, see ZEuS  
J. Fuchs

Programmierkurs III  
Friday, 13:30 – 15:00, R 712  
Tutorial:  
2 groups, see ZEUS  
M. Waldvogel

4. Social Science Applications

Computational Social Science Seminar (6 ECTS)  
Tuesday, 10:00 – 11:30, F 428  
K. Donnay
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<td>10:00 – 11:30</td>
<td>Lineare Algebra (L) / Schnürer</td>
<td>Programmierkurs I (L) / Fuchs</td>
<td>- Diskrete Mathematik und Logik (L) / Kosub</td>
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<td>Analyse und Visualisierung von Informationen (L) / Keim</td>
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<td>- Empirical Research Methods (L) / Shikano</td>
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<td>11:45 – 13:15</td>
<td>Introduction to Computational Methods for the Social Sciences (L) / Donnay</td>
<td>- Research Design I: Research Design and Causal Inference (L) / Selb</td>
<td>- Introduction to Survey Methodology (T) / Selb</td>
<td>Data Mining Basic Concepts (T) / Fuchs</td>
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<td>- Statistik I (T) / Véteinsdóttir</td>
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<td>Information Visualization I (L) / Keim</td>
<td>Analyse und Visualisierung von Informationen (L) / Keim Konzepte der Informatik (L) / Pampel</td>
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<td>Empirie: Quantitative Methoden Methoden I (L) / Hinz</td>
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L = Lecture, T = Tutorial, S = Seminar
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<td>Advanced Econometrics (L) / Pohlmeier</td>
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