Course Catalogue

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

First Year/Second Year

Winter Semester 2019/2020

Version: 08/11/2019
Course Advice for Students of the Master's Programme in Social and Economic Data Science

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Dates of the Winter Semester 2019/2020

Welcome Programme for new Master’s students  
Monday, 14th October 2019, 14:00

Lectures begin:  
Monday, 21st October 2019

Lecture-free period:  
Friday, 23rd December 2019 – Friday, 3rd January 2019

Lectures end:  
Friday, 15th February 2019

Registration period of the Department of Economics:

Seminar registration period for  
Winter Semester 2019:  
Tuesday, 25th June - Monday, 01st July 2019

Seminar registration period for  
Summer Semester 2020:  
Tuesday, 21st January – Monday, 27th January 2020

Exam Registration period:  
Tuesday, 21st January – Monday, 27th January 2020

Examination period I:  
Wednesday, 12th February – Saturday, 29th February 2020

Exam Registration period:  
Tuesday, 17th March – Monday, 23rd March 2020

Examination period II:  
Saturday, 28th March – Saturday, 18th April 2020


Registration period of the Department of Politics and Public Administration:

Exam and Seminar  
Registration period I:  

Registration period II:  
16.03.2020 – 20.03.2020

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): tba
Reg. Period II (lectures): tba
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: 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: https://www.psychologie.uni-konstanz.de/beratung-und-service/formulare-und-downloads/bachelor/
Examination office (Lydia Dreher): 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)  W. Pohlmeier
Tuesday, 10/10/19, 13:30-16:45, F 420
Friday, 11/10/19, 13:30-16:45, G 227
Monday, 14/10/19, 13:30-16:45, G 201
Tuesday, 15/10/19, 13:30-16:45, G 201
Wednesday, 16/10/19, 13:30-16:45, G 201

See ZEuS: https://zeus.uni-konstanz.de:443/hioserver/pages/startFlow.xhtml?_flowId=detailView-flow&unitId=4001&periodId=180

PREP 2: Quantitative Methods in Economics (Duration: 5 days)  J. Alasalmi
Thursday, 17/10/19, 10:00 - 16:45, K 503
Friday, 18/10/19, 10:00 - 16:45, K 503
Monday, 21/10/19, 11:45 - 16:45, G 227a
Tuesday, 22/10/19, 11:45 - 16:45, G 227a
Wednesday, 23/10/19, 11:45 - 16:45, G 227a

See ZEuS: https://zeus.uni-konstanz.de:443/hioserver/pages/startFlow.xhtml?_flowId=detailView-flow&unitId=4003&periodId=180

Department of Computer Sciences:

Kompaktkurs Mathematik 1  S. Kosub
(Duration 5 days, german only)

See ZEuS: https://zeus.uni-konstanz.de/hioserver/pages/cm/exa/coursemanagement/basicCourseData.xhtml?_flowId=searchCourseNonStaff-flow&_flowExecutionKey=e11s4

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

Thursday, 10/10/19, 10:00 – 17:00, D 247
Friday, 11/10/19, 10:00 – 17:00, D 247
Monday, 14/10/19, 10:00 – 17:00, D 247

See ZEuS: https://zeus.uni-konstanz.de:443/hioserver/pages/startFlow.xhtml?_flowId=detailView-flow&unitId=16261&periodId=180
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:  
Wednesday, 10:00 – 11:30, D 301

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  
Tuesday, 11:45 – 13:15, R 511  
Tutorial:  
Group A: Thursday, 10:00 – 11:30, L 601  
Group B: Thursday, 13:30 – 15:00, L 601

Analyse und Visualisierung von Informationen (9 ECTS)  
D. Keim / J. Fuchs  
Monday, 13:30 – 15:00, A 703  
Tuesday, 11:45 – 13:15, A 701  
Tutorial:  
Group A: Thursday, 10:00 – 11:30, L 601  
Group B: Thursday, 13:30 – 15:00, L 601

Please note: “Analyse und Visualisierung von Informationen” (german only) is an alternative to “Information Visualization I” (summer semester) and “Data Mining: Basic Concepts”.

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

Only in combination with

Programmierkurs I (Imperative Sprache) (6 ECTS)  
J. Fuchs  
Tuesday, 15:15 – 16:45, A 703  
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)  S. Kuhlmann
Monday, 10:00 – 11:30, R 712
Thursday, 10:00 -11:30, R 712

Tutorial: tba

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

Datenmathematik  S. Kosub
Tuesday, 15:15 – 16:45, R 712
Thursday, 13:30 – 15:00, R 513

Tutorial:
4 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, C 358

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, 15:15 – 16:45, A 600
Wednesday, 8:15 - 9:45, A 600

Empirie: Quantitative Methoden (6 ECTS)  T. Wöhler
Thursday, 15:15 – 16:45, A 701

Tutorial:
5 groups, see ZEuS

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

Tutorial:
Monday, 15:15 - 16:45, R 711
Statistics

Statistics I (6 ECTS)  
Tuesday, 11:45 – 13:15, R 513

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

1. Advanced Methods: Computer Science

**Konzepte der Programmierung** (6 ECTS)  
M. Grossniklaus  
Tuesday, 08:15 – 9:45, A 702  
Wednesday, 08:15 – 9:45, A 703  

Tutorial:  
4 Groups, see ZEuS

Only in combination with  
**Programmierkurs III (Deklarative Sprache)** (6 ECTS)  
L. Wörteler  
Tuesday, 13:30 – 15:00, A 704

2. Advanced Methods: Statistics

**Advanced Econometrics** (10 ECTS)  
W. Pohlmeier  
Wednesday, 08:15 – 09:45, A 704  
Friday, 08:15 – 09:45, A 704  

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

Tutorial:  
Group A:  
Monday, 15:15 – 16:45, G 300, begins 21/10/2019  
L. Shkoza /  
G. Fechteler /  
C. Mücher

Group B:  
Tuesday, 24/10/19, 13.30-15.00, G 227  
From Tuesday 28/10/19: 13.30-15.15, G 227a  
L. Shkoza /  
G. Fechteler /  
C. Mücher

**Topics in Advanced Econometrics (Statistical Learning)** (8 ECTS)  
L. Grigoryeva  
Monday, 10:00 – 11:30, F 420

3. Programming and Scripting

**Python Block Course** (6 ECTS)  
S. Scholz / et al.  
Monday, 14/10/2019, 10:00 – 13:15, G 227a  
Tuesday, 15/10/2019, 10:00 – 13:15, G 227a  
Wednesday, 16/10/2019, 10:00 – 13:15, G 227a  
Thursday, 17/10/2019, 10:00 – 13:15, G 227a  
Friday, 18/10/2019, 10:00 – 13:15, G 227a

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 from 02/09/2019 – 20/09/2019.
Data Analysis with R (7 ECTS, english)  
Thursday, 08:15 – 09:45, BS 217  
M. Herrmann

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

Programmierkurs I (Imperative Sprache) (6 ECTS)  
Tuesday, 15:15 – 16:45, A 703  
J. Fuchs

Tutorial:  
Six groups, see ZEuS

Programmierkurs III (Deklarative Sprache) (6 ECTS)  
Tuesday, 13:30 – 15:00, A 704  
L. Wörteler

4. Social Science Applications

Computational Social Science Seminar (7 ECTS)  
Monday, 10:00 – 11:30, G 306  
K. Donnay

Political Conflict in the Digital Age (7 ECTS)  
Thursday, 08:15 – 9:45, D 201  
P. Lutscher
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<td>8:15 – 9:45</td>
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<td>Empirical Research Methods (L) / Shikano</td>
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<td>Diskrete Mathematik und Logik (L) / Kosub</td>
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<td>Introduction to Computation for the Social Sciences (L) / Donnay</td>
<td>Data Mining Basic Concepts (L) / Fuchs/Keim</td>
<td>Introduction to Survey Methodology (T) / Selb</td>
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<td>Information Visualization II (T) / Keim</td>
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