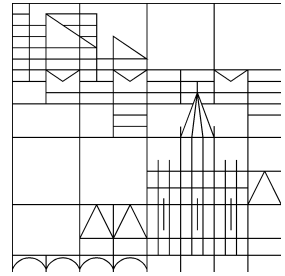


University of Konstanz  
Faculty of Law, Economics and Politics  
Department of Economics



# **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**

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## **Course Advice for Students of the Master's Programme in Social and Economic Data Science**

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Website: www.uni-konstanz.de/seds  
Office Hours: Tuesday, Thursday, 10:00 – 12:00

Student Course Guidance:  
Alessia Invernizzi  
Email: seds.msc@uni-konstanz.de

### **Dates of the Winter Semester 2018/2019**

Welcome Programme for new Master's students	Monday, 15 <sup>th</sup> October 2018
Lectures begin:	Monday, 22 <sup>nd</sup> October 2018
Lecture-free period:	Friday, 22 <sup>rd</sup> December 2018 – Friday, 5 <sup>th</sup> January 2019
Lectures end:	Saturday, 16 <sup>th</sup> February 2019

### **Registration period of the Department of Economics:**

Seminar registration period for Summer Semester 2019:	Tuesday, 22 <sup>nd</sup> January – Monday, 28 <sup>th</sup> January 2019
Exam Registration period:	Tuesday, 22 <sup>nd</sup> January – Monday, 28 <sup>th</sup> January 2019
Examination period I:	Wednesday, 13 <sup>th</sup> February – Saturday, 02 <sup>nd</sup> March 2019
Exam Registration period:	Tuesday, 19 <sup>th</sup> March – Monday, 25 <sup>th</sup> March 2019
Examination period II:	Saturday, 30 <sup>th</sup> March – Thursday, 18 <sup>st</sup> 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:	<a href="https://www.polver.uni-konstanz.de/service/formalitaeten/fristen-und-termine/">https://www.polver.uni-konstanz.de/service/formalitaeten/fristen-und-termine/</a>

## **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<sup>st</sup> May – 15<sup>th</sup> June  
Winter semester: 01<sup>st</sup> December – 15<sup>th</sup> January  
<https://www.geschichte.uni-konstanz.de/en/study/mahistory/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/](http://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**

A. Simmet

(Duration 5 days)

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**

S. Kosub

(Duration 5 days, german only)

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

<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**

F. Götz-Hahn

(Duration 3 days)

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

<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: t.b.a.  
Thursday, 10:00 – 11:30, C 358

Analyse und Visualisierung von Informationen (9 ECTS) D. Keim  
Monday, 10:00 -11:30, A 702

Tuesday, 13:30 – 15:00, R 511

Tutorial: t.b.a.  
Wednesday, 13:30 – 15:00, M 630

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)  
Wednesday, 10:00 – 11:30, R 513  
Thursday, 10:00 – 11:30, R 513

S. Kosub

Tutorial:  
Six groups, see [ZEuS](#)

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

O. Schnürer

Tutorial: t.b.a.

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

J. Schropp

Tutorial:  
15 Groups, see [ZEUS](#)

## Social Science Methods

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

P. Selb

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

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

P. Selb

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

S. Shikano

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

T. Hinz

Tutorial:  
5 groups, see [ZEuS](#)

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

UD. Reips

## Statistics

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

V. Véteinsdóttir

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 [ZEUS](#)

### 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  
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/  
L. Abdullayeva  
Monday, 22/10/2018, 10:00 – 11:30, L 829  
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

J. Fuchs

Tutorial:  
Six groups, see [ZEuS](#)

Programmierkurs III  
Friday, 13:30 – 15:00, R 712

M. Waldvogel

Tutorial:  
2 groups, see [ZEUS](#)

#### **4. Social Science Applications**

Computational Social Science Seminar (6 ECTS)  
Tuesday, 10:00 – 11:30, F 428

K. Donnay



## Timetable Foundations of Data Science Winter Semester 2018/2019

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:15 – 9:45	Optional German Course Mathematik für Wirtschaftswissenschaftler I (L) / Schropp			Optional German Course	
10:00 – 11:30	Lineare Algebra (L) / Schnürer  Analyse und Visualisierung von Informationen (L) / Keim	Programmierkurs I (L) / Fuchs	- Diskrete Mathematik und Logik (L) / Kosub - Empirical Research Methods (L) / Shikano - Introduction to Computational Methods for the Social Sciences (T) / Donnay	Diskrete Mathematik und Logik (L) / Kosub  Mathematik für Wirtschaftswissenschaftler I (L) / Schropp  Data Mining Basci Concepts (T) / Fuchs  Lineare Algebra (L) / Schnürer	
11:45 – 13:15	Introduction to Computational Methods for the Social Sciences (L) / Donnay	- Research Design I: Research Design and Causal Inference (L) / Selb  - Statistik I (L) / Véteinsdóttir	- Introduction to Survey Methodology (T) / Selb - Statistik I (T) / Véteinsdóttir	- Information Visualization I (T) / Keim - Introduction to Survey Methodology (L) / Selb	
13:30 – 15:00	Information Visualization I (L) / Keim Konzepte der Informatik (L) / Pampel	Analyse und Visualisierung von Informationen (L) / Keim Konzepte der Informatik (L) / Pampel	Analyse und Visualisierung (T) / tba		
15:15 – 16:45	Empirie: Quantitative Methoden Methoden I (L) / Hinz	Data Mining Basic Concepts (L)/ Fuchs			
17:00 – 18:30		Empirical Research Methods (L) / Shikano			
18:45 – 20:15					

L = Lecture, T = Tutorial, S = Seminar

## Timetable Advanced Modules Winter Semester 2018/2019

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:15 – 9:45			Advanced Econometrics (L) / Pohlmeier	Data Analysis with R (S) / Herrmann	Advanced Econometrics (L) / Pohlmeier  Advanced Time Series Analysis (T) / Braun
10:00 – 11:30	Advanced Time Series Analysis (L) / Brüggemann	Programmierkurs I (L) / Fuchs  Computational Social Science Seminar (S) / Donnay		Datenanalyse mit R (S) / Herrmann	
11:45 – 13:15					
13:30 – 15:00					Programmierkurs III (L) Waldvogel
15:15 – 16:45	Algorithmen und Datenstrukturen (L) / Schreiber	Algorithmen und Datenstrukturen (L) / Schreiber			
17:00 – 18:30					
18:45 – 20:15					

L = Lecture, T = Tutorial, S = Seminar

