Master‘s programme in Social and Economic Data Science

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University of Konstanz
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Konstanz – in the heart of Europe
We’re based at the Lake Constance, bordering Switzerland and Austria.
Lake Constance – Border Triangle
City of Konstanz
The University of Konstanz

Internationally renowned in the research fields: Collective Behaviour & the Politics of Inequality

92% of our international students recommend us ISB 2016

1 of 11 Universities of Excellence in Germany
First-class sports activities

**Mountain sports**: bouldering, climbing, hiking, trekking, skiing, snowboarding, snowshoeing …

**Water sports**: canoeing, kayaking, rowing, sailing, standup paddleboarding, swimming, diving …

**Team sports**: basketball, football, handball, floorball, lacrosse, rugby, underwater rugby, volleyball …

**Racket games**: badminton, table tennis, tennis …

**Individual sports**: archery, track and field, boxing, cycling, dancing, fencing, gymnastics, martial arts, running …

– hsp.uni.kn
Services for international students

Getting started

- Orientation Programme before the start of your first semester
- German Language Programmes before and during each semester
- Prep Courses from the participating departments before you start
- Master’s hut to get to know your fellow students (if COVID-19 allows it)
- Housing for international students in a convenient and safe location. Single rooms in shared apartments or single apartments available.
- Buddy programme with 2nd semester MSc SEDS students
- International Office
- Career Service
Life of an international student

Beautiful city
- Bright, colorful and warm in spring
- Amazing snowy sceneries in winter
- Surrounded by the alps
- Free Wi-Fi in the center of the city

Lots of activities for all likes and tastes
- Clubs, shops, movie theaters, hot springs
- Great cycling routes
- Swimming in the lake
- Skiing in Switzerland

Easy to travel to other cities
- Zurich airport just 50 mins. away with routes to most important cities in Europe and Asia
- Train and bus connections to touristic cities in Germany, Switzerland and Austria, many offers by the international office
Big university with personalized curriculum

One campus with all the commodities
- Beautiful 24 hour library recently renovated
- Cafeteria buffet-style with low prices for students
- Bus connection to all points in the city
- Free Wi-Fi on campus and on the fitness center
- Computers, printers and scanners available 24/7
- Orientation camp

Flexible and complete Master’s Programme in Social and Economic Data Science
- You can choose lectures and seminars to complement and enhance your background
- Lectures and seminars from 6 different departments
- Regular Get-Togethers with SEDS students and professors
Impact of COVID-19

The general situation due to Covid-19 is quite dynamic, and we are adapting to changes as they come along.

At the moment the University of Konstanz plans a hybrid semester for the winter term 2021/22 with some courses and events online and some in person.

With this course of action we are trying to balance the different needs of keeping everyone safe, but also giving you a chance to get to know the university, the professors and each other.

As we know that a new start under these circumstances can be daunting, we will do our best to support you in this process.
"Knowledge and skills to collect, manage and analyse data on human action and interaction - for future experts in Big Data"

M.Sc. Social and Economic Data Science
M.Sc. Programme in Social and Economic Data Science: Motivation & Interdisciplinary scope

Motivation to establish the MSc SEDS programme

- Big Data: unprecedented availability of data about human behavior and social interactions
- Forecasting of economic / political / public health trends and events
- Support of evidence-based policy-making and management
- Requires competences and skills from several fields
- Interdisciplinary training of data scientists for private and public sector, academia
M.Sc. Programme in Social and Economic Data Science: Motivation & Interdisciplinary scope

Interdisciplinary scope

- **Computer science**: system architectures and algorithms
- **Mathematics & statistics**: formal grounds for scripting, statistical modeling and inference
- **Social science methodology**: assessment and correction of data quality issues; processing of unstructured data
- **Substantive fields (economics, sociology, political science, psychology)**: theories and research questions
M.Sc. Programme in Social and Economic Data Science: Curriculum

Curriculum

- **Semesters 1**: „introduction to computation for the social sciences“, foundations of data science
- **Semester 2 & 3**: advanced methods of data science, data science project, internship
- **Semester 4**: Master‘s thesis
- **Further information** at the programme‘s website: https://www.wiwi.uni-konstanz.de/en/study/master-of-science/seds/curriculum/
M.Sc. Programme in Social and Economic Data Science: Curriculum

Foundations of Data Science (18 ECTS):

- **Computer Sciences**
  - Information Visualization I
  - Data Mining: Basic Concepts
  - Konzepte der Informatik and Programmierkurs I

- **Mathematics**
  - Diskrete Mathematik und Logik
  - Analysis und lineare Algebra
  - Datenmathematik
  - Mathematik für Wirtschaftswissenschaftler
  - Lineare Algebra I
M.Sc. Programme in Social and Economic Data Science: Curriculum

- **Statistics**
  - Statistik I (Politics and Public Administration)
  - Statistik (Psychology)
  - Statistics I (Economics)
  - Statistik (Sociology)

- **Social-scientific Methods**
  - Econometrics I (Economics)
  - Introduction to Survey Methodology (Politics and Public Administration)
  - Research Design I: Research Design and Causal Inference (Politics and Public Administration)
  - Empirical Research Methods (Politics and Public Administration)
  - Empirie: Quantitative Methoden (Sociology)
  - Methoden I & II (Psychology)
M.Sc. Programme in Social and Economic Data Science: Curriculum

Advanced Methods of Data Science (Semester 2&3):

- Advanced Methods: Computer Science (Big Data Management and Analysis, Algorithmen und Datenstrukturen, Database systems etc.)
- Advanced Methods: Statistics (Probability Theory and Statistical Inference, Microeconometrics, Research Design II, etc.)
- Programming and Scripting (Data Analysis with R, Advanced Data Challenge, Programmierkurse)
- Social Science Applications (Computational Social Science Seminar, Data Science Project, Internship)

MSc Colloquium and Master’s Thesis (Semester 4)

- Language of tuition: mostly English
- Duration: 4 Semesters
- Application deadline: 30th April
M.Sc. Programme in Social and Economic Data Science: Target group & admission

Target group

- Students with a B.A. in a social science (or in computer science) and a strong interest in quantitative methods and empirical research

Admission

- 16 students per year
- **Requirements:**
  - above average B.A. degree;
  - min. **three** B.A. courses that cover at least **two** focus areas (mathematics, statistics, computer science, social-scientific methods)
  - Evidence of a sufficient command of English
  - CV and motivation letter
  - Two letters of recommendation from university teachers
  - Results of the GRE test desirable (Graduate Record Examinations)

Tuition fees

- no tuition fees for citizens from EU- and EEA-member states
- 1,500 € per semester for citizens from non EU- and non EEA-states
How to apply

Application deadline: April 30th

1. Find detailed information on our website
   https://www.wiwi.uni-konstanz.de/en/study/master-of-science/seds/how-to-apply/
   Contact us if you have any questions.

2. Collect and scan all necessary documents.
   A checklist is available on our website.

3. Apply through our online application system
   (scanned application documents are sufficient)
   The Online Application System ZEuS will open for MSc SEDS on March 15th, 2021!
Why study MSc SEDS?

- A unique, interdisciplinary programme bridging social sciences and computer science
- Big variety of classes for high quality education
- Study with top-notch, international guest researchers
- Small classes allow for close interaction with your lecturers
Why study MSc SEDS?

- Be part in an international and open environment in the heart of Europe
- Graduates will be highly employable as data scientist e.g.:
  - in academia
  - in polling firms
  - in market research institutes
  - in online marketing
  - as political advisor
  - as social policy consultant

Enjoy our beautiful countryside: Enjoy swimming or sailing on the Lake Constance, go hiking or skiing in the nearby Black Forest or the Swiss Alps.
Financial Aspects of your Studies

The cost of living for students is about 850 euros per month

Usual expenses in Konstanz:

- Accommodation: 242 – 420 € / month
  (student accommodation)
  300 – 450 € / month
  (private accommodation)

- Food, clothes, …: ca. 400 € / month

- University fees: 160 € / semester
  (1500 € for non EU/EEA-students / semester)

- Public transportation: 56 € / semester

- Health insurance: free for EU/EEA-students,
  105 - 110 € / month for non-EU/EEA-students

- Broadcasting fees: 18 € / month

+ Leisure activities: travelling, skiing, …

- Remuneration from a job?
The practical dimension: Job opportunities inside and outside the University

Option 1: You work at the University
- There are a number of student jobs: in the departmental administration, the International Office, research projects, …
- Contracts of between 20 and 50 hours per month
- Gross hourly wages of 11.64 € (M.Sc.)
- Usually, all students interested in a job are able to find a job

Option 2: You look for an internship
- The Dept. of Politics and Public Administration maintains a large internship database. The Dept. of Economics publishes internship positions regularly.
- Internship positions at private enterprises, international organizations, NGOs, public authorities,— in Germany, Europe, and worldwide
Advisory service

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