Info-Meeting
MSc Social and Economic Data Science (SEDS)

Prof. Dr. David Garcia (Professor for Social and Behavioral Data Science)
Kathrin Krautheimer (Program Coordinator MSc SEDS)
Kathrin Ebel (Erasmus Coordinator)
Orr Borin (Student Assistant MSc SEDS)
Konstanz, 2nd March 2023
Outline

- Short survey
- City of Constance and the University of Constance
- MSc SEDS program (current developments, curriculum, exemplary teaching formats, etc.)
- Extra input: Advanced Data and Information Literacy Track (ADILT)
- Going abroad options
- Financial aspects
- Admission requirements
- How to apply for the program
- Contact details
Ready for a new adventure?

https://survey.lamapoll.de/MSc-SEDS_Info-Meeting_March-2023
Lake of Constance

In the heart of Europe.
We’re based at the Lake Constance, bordering Switzerland and Austria.
City of Constance
University of Konstanz

- 1 of 11 Universities of Excellence in Germany
- Medium-sized campus university with short distances to cover
- Flat hierarchies and structures
- 11,400 students
- Around 100 different study programs in the fields of mathematics and natural sciences, humanities, law, economics and public administration
- Many interdisciplinary and/or international programs
- 24/7 library access
- Bus connection to all points of the city
- Free Wi-Fi on campus
Sports Activities
Services for international students

- Orientation program ("OriPro Master") before the start of your first semester
- German language courses
- Different Prep Courses from participating departments (e.g. Python course)
- Master’s hut to get to know your fellow students (if pandemic situation allows it)
- Housing for international students in a convenient and safe location
- Buddy program with 2nd semester MSc SEDS students
- International Office
- Career Service
Our interdisciplinary program
(4 semester)

The MSc SEDS comprises six different departments:

- Politics and Public Administration
- Computer and Information Science
- Economics
- Mathematics and Statistics
- Psychology
- Sociology and History

Why studying MSc SEDS?

- Unique international & interdisciplinary study program
- Wide variety of coursework for high quality education
- Great employability as data scientists/data analysts e.g. in academia, private and public sector
Current developments of the program

- Expansion of the study places: 16 → 36
- Two new professorships in Social and Behavioral Data Science (Prof. Dr. David Garcia, started Oct 2022 at University of Konstanz) + Data Analytics and Computational Statistics
- One new lectureship in Computational Social Science / Data Science
- Three new international partnerships with University of Essex (MSc Social Data Science), University of Ljubljana (MSc Social Informatics) and University of Rutgers (MSc Public Informatics)
Job opportunities

- Our students and alumni are pursuing very individual career paths.
- For example, they work as data scientists, data engineers, machine learning engineers, data analysts, BI specialists, etc.
- The job profile "Data Analysts and Scientists" is listed as number 1 of the Top 10 emerging jobs with a growing job demand for the year 2025 (Future of Jobs Report of the World Economic Forum)

“The SEDS program is challenging but flexible: You can get well prepared either for a data science position in the business/non-profit/public sector, as well as for a Ph.D. program that focuses on empirical research.”

(Qixuan Yang, MSc SEDS, 2018)
Curriculum

1st + 2nd semester

Introduction to Computational Methods for the Social Sciences (9 ECTS)

Foundations of Data Science (18 ECTS)

2nd + 3rd semester

Module Advanced Methods: Computer Science (18 ECTS)

Module Advanced Methods: Statistics (18 ECTS)

Module Programming and Scripting (12 ECTS)

Module Social Science Applications (18 ECTS) – Internship, DSP

4th semester

Colloquium (3 ECTS) + MA-Thesis (24 ECTS)

Further information: polver.uni.kn/seds
Courses taught by David Garcia

Winter semester 2022/23
- Introduction to Computational Methods for the Social Sciences “ICSS” (9 ECTS)
- Computational Modeling of Social Systems (6 ECTS)
- Colloquium for master thesis (3 ECTS)

Summer semester 2023
- Social Media Data Analysis (9 ECTS)
- Seminar: Current Topics in Social Data Science (6 ECTS)
- Colloquium for master thesis (3 ECTS)
ICSS

- Basic overview of computer systems
- Programming principles
- Information coding and storage
- Data structures and algorithms
- Broad introduction to programming with python

Foundations

- Introductory courses in maths: Diskrete Mathematik und Logik, Analysis und Lineare Algebra
- Introductory courses in statistics: Statistik 1
- Introductory courses in computer science: Data Mining, Konzepte der Informatik
- Social-scientific Methods: Econometrics, Research Design 1
Advanced Methods

Computer Science
- Database Systems
- (Advanced) Data Visualization
- Geographic Information Systems
- Document Analysis
- Big Data Management
- Graph Data Management
- Network Modelling
- Introduction to Machine Learning

Statistics
- Advanced Econometrics
- (Advanced) Time Series Analysis
- Bayes Statistics
- Research Design 2
- Regression Analysis
- Datenmathematik
Programming & Scripting

- Python Block Course
- Data Analysis with R
- Programming Course 1, 2, 3
- Linguistic Gaming with Python
- Deep Learning with Python

Social Science App.

- Data Science Project
- Internship
- Seminars:
  - Deep Learning with Python
  - Computational Modeling of Social Systems
  - Advanced Statistics
  - Machine Learning and Optimization
Programming Languages
Internships

You want to get credits for your internship? Great!

- **6 ECTS**
- **Working hours**: full time = 35 hours/week (half time also possible upon consultation)
- **Minimum duration**: 6 weeks (full time)/12 weeks (half time)
cyberLAGO

The SEDS program is cooperating with cyberLAGO in order to offer our students best conditions for an easy career start in the region!

cyberLAGO is the network of digital experts in the international Lake Constance region and the central point of contact for all questions relating to digitization, digital transformation and IT.

cyberLAGO offers our students an exclusive job market to get internships and student working positions in the regional digital business sector.
Data Science Project

You want to apply your acquired knowledge from your studies in practice? Go for the DSP!

- 6 ECTS
- Innovative teaching and learning format
- Strong focus on applying knowledge
- Great opportunity to work independently on a project at a university’s chair or with external partners
Short Input

Advanced Data and Information Literacy Track
What is the "Advanced Data and Information Literacy Track" (ADILT)?

- Complemental programme on Data and Information Literacy
- Open for all students of all disciplines
- Overall 30 ECTS
- Combination of relevant courses of the respective study programme and specific course offers
- Including various talks, workshops and meetups with other students and professionals in the field
- Structure: Theoretical basics (1), practical application (2) and reflection (3)
- Completion certificate
Reasons to complete the ADILT - even for fully trained data scientists

- Deepen your expertise in **data literacy** (aspects of storing/publishing experimental data, reflective handling of data in respect to legal, social and ethical aspects)
- Choose from a wide range of additional course offers in the area of media use and design, research, and publishing practices (**information literacy**)
- Get in touch with interdisciplinary application scenarios and practical perspectives, meet professionals from different fields
- Show your extended commitment to data and information literacy with the certificate in addition to your degree ("plus point" on your CV)
How to? – information and contacts

I want to participate - what do I have to do?
- No specific enrollment required
- Take and successfully finish courses creditable for the certificate

What courses can I take?
- [Here](#) you can found a full course overview, interdisciplinary and creditable courses from the respective study programmes
- Many ECTS acquired in the study programme also count for the ADILT certificate
- Information and structure table also on the [website](#)

Who can I ask for further support?
- Questions by email and appointments for a consultation at any time:
  Veronika Pöhnl, veronika.poehnl@uni-konstanz.de
- Open online consultation hour: Fridays 10-11 AM

Quick search:
- [uni.kn/adilt](#)
You want to go abroad?

Study Abroad Options for SEDS students:

- **Erasmus partner universities** of three departments: Politics and Public Administration, Economics, Computer Sciences
- **University-wide global partnerships**
- **NEW! Specific SEDS cooperations:** University of Essex, University of Ljubljana, University of Florence (starting 2024/25)
- Please see our [website](#) or contact our Erasmus+ Coordinator, Kathrin Ebel
Financial Aspects

General expenses and cost of living
Is about **800-1000 EUR** per month, usual expenses are:
- Student residence or private accommodation: 300-450 €
- University fees: 190 € per semester
- Public transportation: 59 € per semester (“Studiticket”)
- Health insurance: Free for EU/EEA-students (110 € for non EU/EEA-students)
- Tel + Internet: 30 €
- Food: 220 €

Tuition fees
- No extra tuition fee for citizens from EU- and EEA-member states
- 1,679 € per semester for citizens from non EU- and non EEA-states
- Further information regarding tuition fees and scholarships for international students can be found [here](#)
Job opportunities

Work at University:
- Student jobs in the departmental administration, International Office, different research projects
- Contracts between 20 and 40 hrs per month
- Gross hourly wage: 12.10 € (for master students)

Internships/Working student
- Regular job offers including internships are published by the university
- Internship positions at private enterprises, international organizations, NGOs, public authorities
- Can be credited with 6 ECTS
Admission Requirements

We are looking for students with different backgrounds (e.g. social science, computer science, etc.) and a strong interest in quantitative methods and empirical research.

- Above average B.A. degree
- Minimum three B.A. courses that cover at least two focus areas (mathematics, statistics, computer science, social-scientific methods)
- Evidence of good English skills (TOEFL, IELTS, Cambridge Certificate, etc.)
- CV and motivation letter
- Two letters of recommendation from university teachers
- Results of the GRE test desirable
Application Deadline
30 of April

Start of the Program
Winter semester 1st Oct
How to apply

1. Find detailed information on our website
2. Contact us if you have any questions
3. Collect and scan all necessary documents → a checklist is also available on our website
4. Apply through our online application system (ZEuS) – between 15 March and 30 April, 2023

Good luck!
Need advice? Please contact us😊

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Thank you!
We are looking forward to your application 😊