

M.SC. BUSINESS ANALYTICS & ECONOMETRICS

Programme Introduction

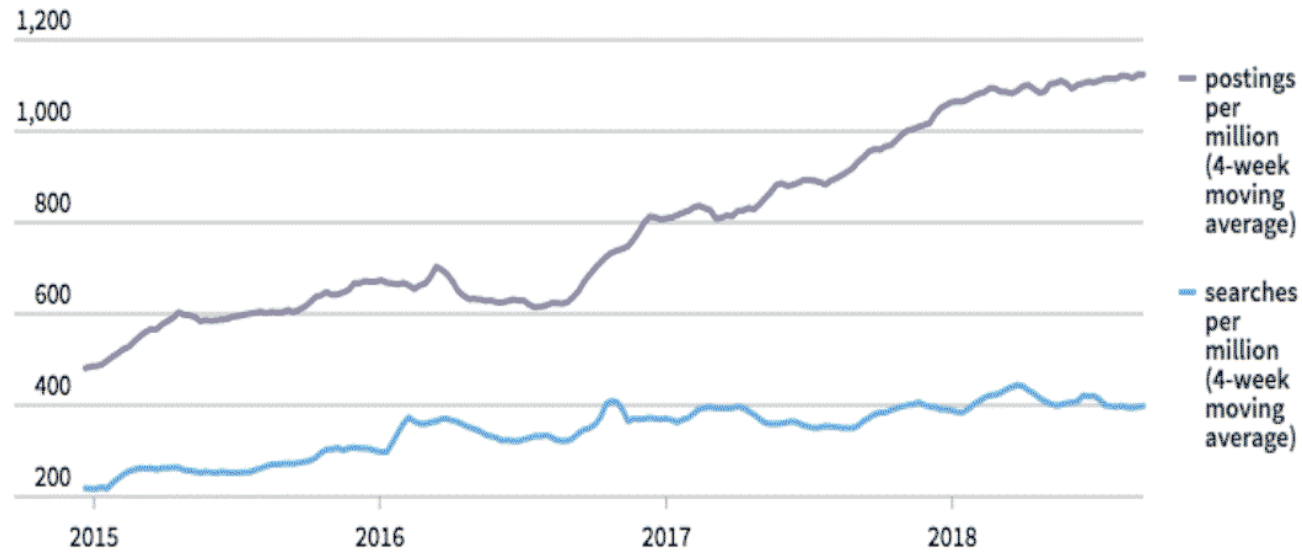


Congratulations for Being Admitted!

5.5%

875 Applications, 48 Inscriptions

Analytics Students Are Desperately Needed!



3X
job postings
versus job searches

Source: <https://quanthub.com/data-scientist-shortage-2020/>

The Vision of the Programme

» Vision

- » Becoming a hub for **future leaders** in analytics
- » Becoming **Europe's** leading analytics programme



VISION

» Mission

- » Equip students with advanced **data analytics skills** to **solve grand challenges** in business and society



MISSION

Who Are Your Teachers?



Mona Mensmann
Prof. Entrepreneurship



Ziyue Li
Ass. Prof. Machine Learning



Sven Otto
Stand-in Prof. Econometrics



Markus Weinmann
Prof. Business Analytics



Tom Zimmermann
Prof. Econometrics

Who is Responsible for the Programme?



Prof. Rainer Dyckerhoff
Programme Director
Programme Administration



Prof. Markus Weinmann
Academic Director
Programme Design

The Foundations of the Programme

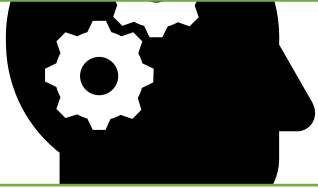


Idea:

- » Based on the **Cross-Industry Standard Process for Data Mining (CRISP-DM)**
- » Having the **business problem** in mind
- » **Applying methods** from Business Analytics and Econometrics
- » **Advanced courses** on digital innovation and strategy, data management, visualization, (advanced) statistics, machine learning, deep learning
- » Active **industry cooperation** (Capstone project)

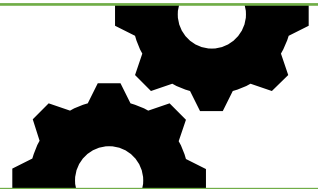
Source: https://en.wikipedia.org/wiki/Cross-industry_standard_process_for_data_mining

Goals of the Programme



Marry High-Demand Subjects

- Data Analytics, Econometrics
- Management, Digital Innovation, and Entrepreneurship



Teach Technical Data Analysis (Focus on Application)

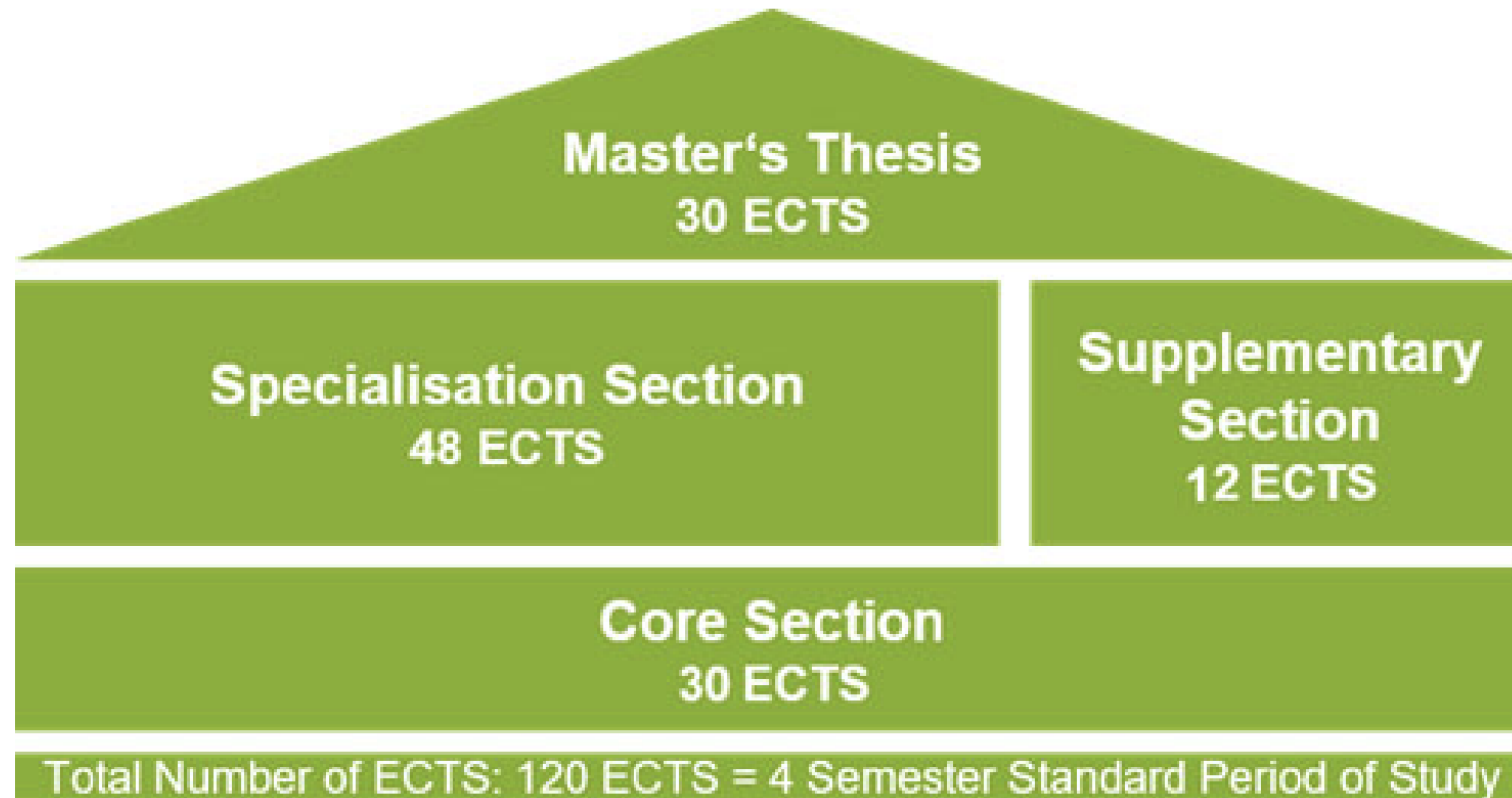
- Programming
- Machine Learning & AI



Transfer of Data Analysis Skills

- Build a digital business model/strategy
- Identify and solve complex economic issues in for corporates and non-profits

In Total, You Need to Gather 120 ECTS



Programme Design

1	<p>Foundation of Data Analytics 30 CP</p>	
2	<p>Digitalization and Data Analytics 30 CP, including Capstone Project with Industry Partners, and Elective 1</p>	
3	<p>Econometrics Track</p>	<p>Business Analytics Track</p>
	<p>Focus on Empirical Methods 24 CP</p>	<p>Focus on Analytics for Business 24 CP</p>
	<p>Elective 2 6 CP</p>	<p>Elective 2 6 CP</p>
4	<p>Master Thesis 30 CP</p>	

Semester

Programme Design (Courses)

MSc. Business Analytics and Econometrics		
Block Semester 1		LP
1	Data Analytics I (Statistics for Data Analytics)	6
1	Data Analytics II (Programming for Data Analytics)	6
1	Data Analytics III (Machine Learning and Artificial Intelligence)	6
2	Data Analytics IV (Advanced Statistics for Data Analytics)	6
2	Data Analytics V (Data Management and Data Visualization)	6
Block Semester 2		30
1	Digitalization and Data Analytics I (Digital Innovation and Digital Entrepreneurship)	6
1	Digitalization and Data Analytics II (Privacy and Ethics in a Digital World)	6
1&2	Capstone Project	12
2	Elective 1	6
Block Semester 3		30
	Business Analytics Track	Econometrics Track
1	Analytics for Business I (Bayesian Data Analytics)	6
1	Analytics for Business II (Advanced Data Analytics for Business)	6
2	Analytics for Business III (Digital Strategy and Digital Transformation)	6
2	Seminar Data Analytics for Business	6
2	Elective 2	6
		Empirical Methods and Data Analysis I (Probability and Statistical Inference) Empirical Methods and Data Analysis II (Microeconometrics) Empirical Methods and Data Analysis III (Time Series / Stochastic Models) Empirical Methods and Data Analysis IV (Statistical Analysis of Financial Data) Empirical Methods and Data Analysis V (Multivariate Statistics / Panel Data) Seminar in Statistics and Econometrics
		24
		6
Block Semester 4		30
1&2	Thesis	30
		30

Electives (imported)

<i>Business Analytics</i>	SM Analytics for Business I (Bayesian Data Analytics)	6	12
	SM Analytics for Business II (Advanced Data Analytics for Business)	6	
	SM Analytics for Business III (Digital Strategy and Digital Transformation)	6	
	SM Seminar Data Analytics for Business (Seminar Data Analytics for Business)	6	
<i>Econometrics</i>	BM Advanced Econometrics I (Advanced Econometrics: Theory)	6	
	BM Advanced Econometrics II (Advanced Econometrics: Applications)	6	
	SM Seminar Empirical Methods and Data Analysis (Seminar Empirical Methods and Data Analysis)	6	
	SM Seminar in Statistics and Econometrics (Seminar in Statistics and Econometrics)	6	
	SM Empirical Methods and Data Analysis I (Probability and Statistical Inference, Topics in Econometrics and Statistics I)	6	
	SM Empirical Methods and Data Analysis II (Microeconometrics, Machine Learning for Economists, Topics in Econometrics and Statistics II)	6	
	SM Empirical Methods and Data Analysis III (Time Series Econometrics, Stochastic Models and Processes, Topics in Econometrics and Statistics III)	6	
	SM Empirical Methods and Data Analysis IV (Statistical Analysis of Financial Data, Topics in Econometrics and Statistics IV)	6	
	SM Empirical Methods and Data Analysis V (Multivariate Statistics, Panel Data Analysis, Bayesian Econometrics, Topics in Econometrics and Statistics V)	6	
	BM Econometrics (Econometrics)	6	
	BM Mathematics (Mathematics for Economists)	6	
<i>Economics</i>	BM Microeconomics (Microeconomics)	6	
	BM Macroeconomics (Macroeconomics)	6	
<i>Management and Applied Business Analytics</i>	SM Information Systems I (Advanced Analytics and Applications, Sustainable Digital Innovation Lab, Case Project Digital Transformation)	6	
	SM Information Systems II (Emerging Electronic Business, Business Intelligence and Data Management, IT Entrepreneurship, Bayesian Data Analytics)	12	
	SM Information Systems III (Artificial Intelligence and Information Management, Machine Learning and Artificial Intelligence, Applied Mathematical Optimization, Decision Making under Uncertainty)	6	
	SM Marketing Performance Management (Marketing Performance Management)	6	
	SM Business Project (Business Project in Marketing, Applied Research Project in Marketing)	6	
	SM Controlling I (Operative Controlling)	6	
	SM Controlling II (Strategic Controlling)	6	
	SM Advanced Accounting (Value-based Controlling)	6	
	BM People Analytics & Econometrics (People Analytics & Econometrics)	6	
<i>Studies Abroad</i>	Studies Abroad I (Business Analytics & Econometrics)	6	
	Studies Abroad II (Business Analytics & Econometrics)	6	

Study Abroad

- » Study Abroad Programme (STAP)
 - » Apply at the beginning of the programme!
 - » Application deadline: Jan 15
 - » Check: STAP Master Application Manual

STAP Master – main selection round (fall term and spring term)



* Alternative offer: if no offer can be given at one of the five preferred universities and if slots at other universities are available.

** End of main selection round. In case any exchange slots become available after 15 March, these slots will be made available in a secondary selection round.

- » Available universities: WiSo EXchange (WEX) International Outgoings Portal
- » Short-term study option in New York (WiSo@NYC)

Capstone Project

More than an Internship

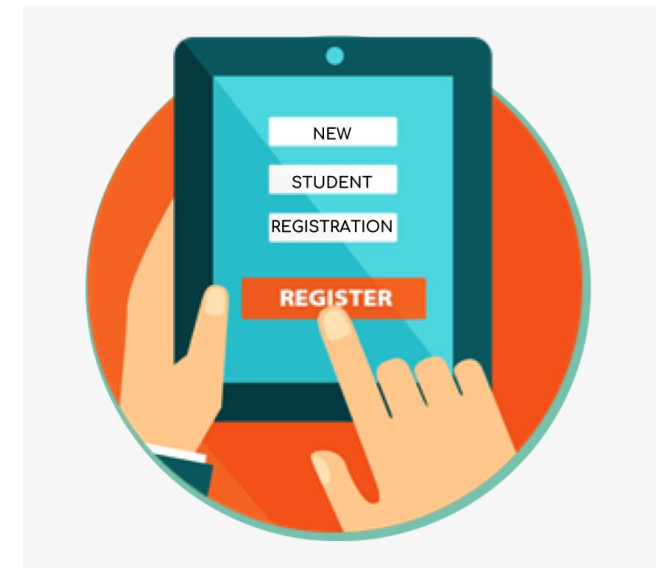
- » 12-week project with practitioners
- » Dedicated support (e.g., methodology) from the WiSo faculty & partner companies
- » Forum to share and learn beyond the own project & benefit from the community

Strong Partners



Course and Exam Registration

- » Course registration:
 - » On KLIPS
- » Exam registration:
 - » On KLIPS
 - » Course registration does not imply exam registration!
 - » Keep in mind the deadlines!
- » Support:
 - » klips-wiso@uni-koeln.de



How We Communicate?

- » We communicate in English (with everybody)
- » We use first names
- » Program Email Adress: msc-bae@uni-koeln.de

Ilias bulletin board

- » Link: https://www.ilias.uni-koeln.de/ilias/goto_uk_crs_5358554.html
- » Link to join the course: https://www.ilias.uni-koeln.de/ilias/goto.php?target=crs_5358554_rcodeEfmQ7kxuQw&client_id=uk

Magazin > ... > ... > ... > ... > Master Business Analytics & Econometrics > Master Business Analytics & Econometri...

Master Business Analytics & Econometrics

Inhalt Info Einstellungen Mitglieder Metadaten Export Rechte Elektronischer Semesterapparat Voransicht als Mitglied aktiviere

Zeigen Verwalten Sortieren

Neues Objekt hinzufügen Seite gestalten

Dear students,

Welcome to the program's Ilias board. We are looking forward to teaching you advanced analytics and econometrics for managerial or economic contexts.


Here, we will provide you with general information about the program. We will use the group to communicate with you.

In case you want to reach us, please use msc-bae@uni-koeln.de.

All the best,

Mona, Markus, Rainer, Tom

Inhalt

 Cohort 2022
Beitritt: Keine Anmeldung möglich

 Cohort 2023
Beitritt: Keine Anmeldung möglich

Scan this QR code:



Becoming a Leading Analytics Programme

Idea:

- » We will **continuously improve** the program; therefore, we need your help
- » We ask you to form a **student advisory committee (SAV)** (3 students)
- » We will meet with you after each block to **get your feedback**
- » Please let us know who wants to be part of the SAV by Friday, October 4.



Conclusion & Opportunities

- **Comprehensive Curriculum:** The program offers a deep dive into modern data analysis, econometrics techniques, and business intelligence.
- **Career Prospects:** Graduates are equipped for top-tier roles in data analytics, market research, finance, and more.
- **World-class Faculty:** Learn from industry leaders and academic experts in the field of Business Analytics.
- **Hands-on Experience:** Real-world projects and case studies ensure practical experience and understanding.
- **Network:** Join a community of like-minded professionals and peers, creating lifelong connections.

In the world of data, be the expert
who turns numbers into actionable
insights.

**Good luck and a successful start
to your studies!**