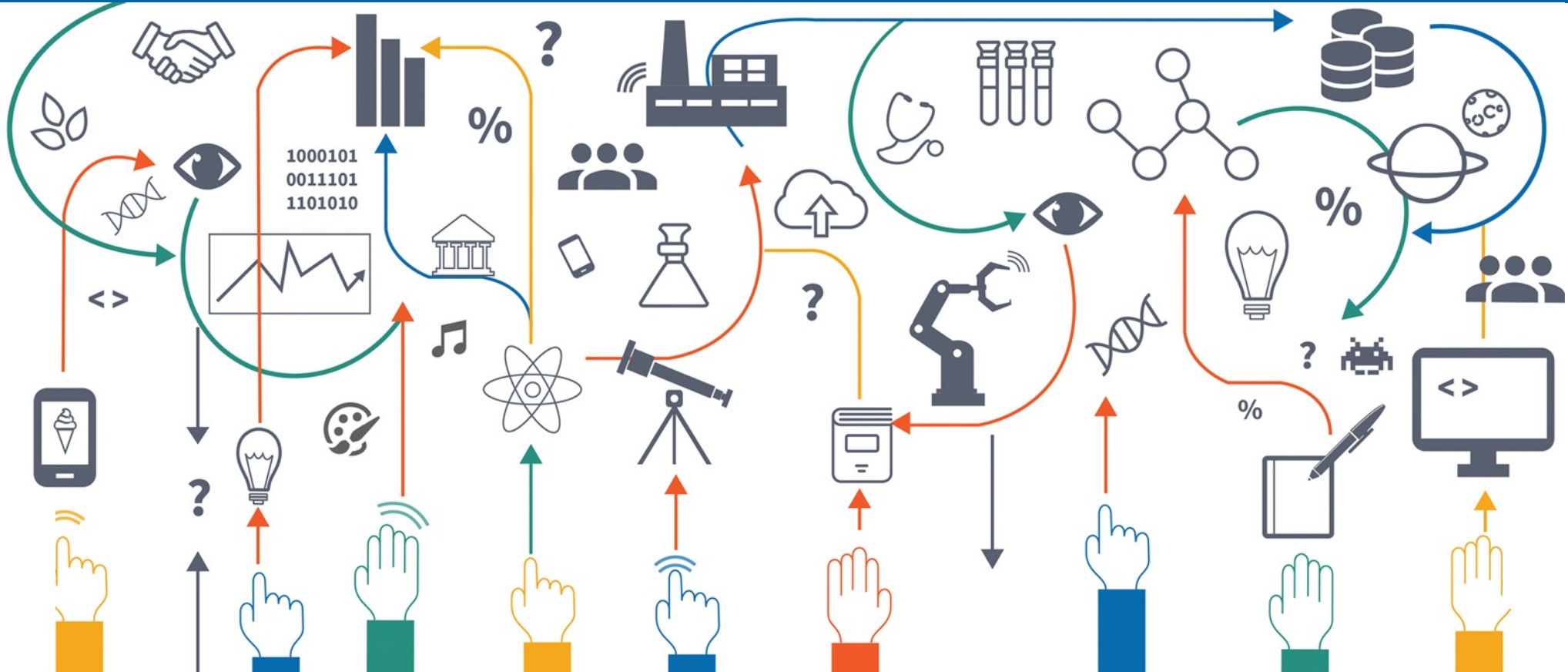New Master Programmes
Business Analytics, Data Science and Digital Humanities

Today's presenters:

Torsten Möller
Professor for Scientific Visualization

Jan Ehmke
Professor for Business Analytics

Claudia Plant
Professor for Data Mining

Tara Andrews
Professor for Digital Humanities

Hannes Fellner
Professor for Linguistics

Thomas Wallnig
Associate Professor for History

Business Analytics, Data Science and Digital Humanities

- The **digital transformation** of our society changes businesses, the government, the sciences as well as our daily personal lives. Very few places in the world are able to engage on all of these fronts.

- The **University of Vienna** provides the breadth and the excellence to tackle these aspects

- this breadth is unique

- **all three programmes allow interaction and collaboration** between students and researchers in all three programmes

- **sharing a common curriculum** for almost a full semester

- **joint venture** of the faculties of Business, Economics and Statistics, Computer Science, Historical and Cultural Studies, Mathematics, and Philological and Cultural Studies.

Business Analytics, Data Science and Digital Humanities

- research oriented: critically analyse and question scientific findings.

- project-based learning

- self-directed and largely self-organized learning

- teamwork and interaction

- Application-oriented, problems coming from finance, medical, humanities, astronomy, industry 4.0

Business Analytics, Data Science and Digital Humanities

All our programmes include the following contents (taught on a cross-curricular basis):

- Doing Data Science

- Data Ethics and Legal Issues

- Data Science Project

- Research Seminar

- Master Thesis, Master Seminar and Defensio

Please visit https://datascience.univie.ac.at/masters/

Business Analytics

Goal: Learn **predictive and prescriptive analytics** methods for business applications

Business administration minor: Students choose an in-depth area of business administration, for which they conduct data analyses and design, implement and **prototype decision support systems.**

What you can expect: theoretical and practical concepts of statistics, operations research, data science, and the design of information systems.

High degree of **analytical thinking required!**

Banking and Finance

(International) Marketing

Supply Chain Management

Smart Production

Organisation and Personnel

Electronic Business

Semester Plan Master Business Analytics

1. Semester	Programming for Business Analytics (8 ECTS) / Foundations of Business Decicion Making (8 ECTS)	Advanced Business Analytics (6 ECTS)	Doing Data Science (6 ECTS)	Business Administration Minor (8 ECTS)
2. Semester	Advanced Operations Research (8 ECTS)	Modelling and Handling of Large Databases (6 ECTS)	Data Ethics and Legal Issues (6 ECTS)	Business Administration Minor (12 ECTS)
3. Semester	Data Science Electives (12 ECTS)	Business Analytics Elective (4 ECTS) / Research Seminar (4 ECTS)		Data Science Project (12 ECTS)
4 Semester	Master Thesis, Conversatorium for Master Candidates, Defensio (24 + 2 + 2 = 28 ECTS)			

Data Science

- Modern data science

- Application driven

- Interdisciplinary skills

- Solid mathematical and statistical foundation

- Domain knowledge

Data Science

Expect a good mix of math, stats, and cs.

These topics can be expected during your studies:

- Machine Learning
- Mathematical & Statistical Foundations
- Optimization Methods
- Mining Massive Data
- Visual and Exploratory Data Science
- Many possible specialisations

Semester Plan Master Data Science

1. Semester	Doing Data Science (6 ECTS)	Math for Data Science (4 ECTS)	Optimization Methods for Data Science (4 ECTS)	Introduction to Machine Learning (6 ECTS)	Statistics for Data Science (6 ECTS)	Specialization (4 ECTS)
2. Semester	Data Ethics and Legal Issues (6 ECTS)	Mining Massive Data (6 ECTS)		Visual and Exploratory Data Analysis (4 ECTS)	Specialization (14 ECTS)	
3. Semester	Research Seminar (4 ECTS)	Data Science Project (12 ECTS)			Specialization (16 ECTS)	
4. Semester	Master Thesis, Conversatorium for Master Candidates, Defensio (24 + 2 + 2 = 28 ECTS)					

Digital Humanities

The aim of the Master's degree programme in Digital Humanities (DH) at the University of Vienna is to train students who will make a **significant contribution** to the promotion and anchoring of computer-based methods in humanities research contexts.

In addition to the widespread understanding of the DH as a collective term for diverse digital processes for the **processing and evaluation of text, image and other data**, the focus of our programme is on the development of **new possibilities of knowledge**.

Not only the methods, but also the consequences and perspectives of DH practice are subjected to **critical reflection**. We aim to support the formation of theory, and thus also the development of the DH to a **transdisciplinary, independent scientific discourse**.

Digital Humanities

Students of cultural studies subjects are offered an extension of competences in the techniques and methods of the DH. The close cooperation with the Master's programmes Data Science and Business Analytics is unique, whereby not only technical but also **ethical, legal and scientific theoretical contents are taught together.**

Digital Humanities

These topics can be expected during your studies:

- Digital Humanities Skills:
  - Introductory programming and data management
  - Specific skills such as GIS, XML/TEI, visualization and interface design

- Theory and Practice of the Digital Humanities

- Specialisation in Clusters of Digital Humanities:
  - Application of digital methods to specific humanities fields
  - Also intended to deepen formal & theoretical grasp of fields studied in the BA

Students complete their studies with a master's thesis that deals with a problem or area of application of the DH in an exemplary or theoretical way.

Semester Plan Master Digital Humanities

1. Semester	Theory and Practice (5 ECTS)	Theory and Practice UE (5 ECTS)	Digital Humanities Skills I (5 ECTS)	Digital Humanities Skills I (5 ECTS)	Digital Humanities Skills II (5 ECTS)	Digital Humanities Skills II (5 ECTS)
2. Semester	Data Ethics and Legal Issues (6 ECTS)	Data Analysis Project (12 ECTS)		Specialization (6 ECTS)	Digital Humanities Skills II (5 ECTS)	
3. Semester	Research Seminar (4 ECTS)	Doing Data Science (6 ECTS)	Specialization (18 ECTS)			
4 Semester	Master Thesis, Conversatorium for Master Candidates, Defensio (25 + 4 + 4 = 33 ECTS)					

Business Analytics, Data Science and Digital Humanities

- Please visit our website datascience.univie.ac.at/masters/

- Live Q & A now!