Introductory Session
Mannheim Master in Data Science

Introductory Session for Master Students
These slides will be available for download on the following website:

www.wim.uni-mannheim.de
You will be added to the mmds-master mailing list.

Please note: From now on, all email correspondence will go to your University of Mannheim email account!

Check your university mail account regularly!
Communication

1. Please use ONLY your university e-mail address in a university environment
2. Identify the right contact person
3. E-Mail to one person (if you want to write to more than one individual at once, put them in copy)
4. Requests must always include the following data: full name, course of study, subjects, semester and matriculation number.
5. Screenshots of IT issues
6. Keep to polite forms of communication (no chat communication!) - appropriate form of addressing and wording
From: max.mustermann@students.uni-mannheim.de

Dear Ms. Czanderle/Dear Sir or Madam,

I have two questions regarding the organization of the upcoming semester.

There is an overlap of two courses. IE 500 Data Mining Exercise I overlaps with the IE 675b Machine Learning lecture. The alternatives that would fit into my week would be the IE 650 Knowledge Graphs lecture or the CS 600 Model Driven Development lecture. Can you help me out with this?

Kind regards,

Max Mustermann
Matriculation number: 123456
M.Sc. Business informatics (1st FS/1st FS)

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<table>
<thead>
<tr>
<th>Good idea</th>
<th>Bad idea</th>
</tr>
</thead>
<tbody>
<tr>
<td>From: <a href="mailto:max.mustermann@students.uni-mannheim.de">max.mustermann@students.uni-mannheim.de</a></td>
<td>From: <a href="mailto:gommemode@gmail.com">gommemode@gmail.com</a></td>
</tr>
<tr>
<td>Dear Ms. Czanderle/Dear Sir or Madam,</td>
<td>Hello. 😊😊😊</td>
</tr>
<tr>
<td>I have two questions regarding the organization of the upcoming semester.</td>
<td>I am studying business informatics here, what do I have to do?</td>
</tr>
<tr>
<td>There is an overlap of two courses. IE 500 Data Mining Exercise I overlaps</td>
<td>Bye, Max</td>
</tr>
<tr>
<td>with the IE 675b Machine Learning lecture. The alternatives that would</td>
<td></td>
</tr>
<tr>
<td>fit into my week would be the IE 650 Knowledge Graphs lecture or the CS</td>
<td></td>
</tr>
<tr>
<td>600 Model Driven Development lecture. Can you help me out with this?</td>
<td></td>
</tr>
<tr>
<td>Kind regards,</td>
<td></td>
</tr>
<tr>
<td>Max Mustermann</td>
<td></td>
</tr>
<tr>
<td>Matriculation number: 123456</td>
<td></td>
</tr>
<tr>
<td>M.Sc. Business informatics (1st FS/1st FS)</td>
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</tr>
</tbody>
</table>
Master in Data Science

Interdisciplinary
- Computer Science
- Mathematics & Statistics
- Social Science

Applied
- Hands-on experience
- Close cooperation with industry partners (e.g. in most projects)
Structure of the M.Sc. Program

- **Projects and Seminars**
  - 14-18 ECTS

- **Fundamentals**
  - Maximum of two modules
  - 0 - 14 ECTS

- **Data Management**
  - Minimum of three modules
  - 18 - 36 ECTS

- **Responsible Data Science**
  - Minimum of one module
  - 3 – 10 ECTS

- **Data Analytic Methods**
  - Minimum of four modules
  - 30 - 54 ECTS

- **Master’s Thesis**
  - 30 ECTS
Structure of the M.Sc. Program

Fundamentals

- Programming Course
  - 6 ECTS

- Database Technology
  - 6 ECTS

- Quantitative Methods
  - 6 ECTS

- Introduction to Scientific Programming with Python *
  - 6 ECTS

- Statistics for Data Scientists
  - 8 ECTS

- Empirische Methoden der Politikwissenschaft
  - 6 ECTS

- Tutorial Quantitative Methods
  - 2 ECTS

* Prerequisites: No completed exam in CS 470 Programming with Python
## Structure of the M.Sc. Program

### Data Management

<table>
<thead>
<tr>
<th>Module no.</th>
<th>Name of module</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC 651</td>
<td>Additional Course – Data Management</td>
<td>Max. 18</td>
</tr>
<tr>
<td>CS 500</td>
<td>Advanced Software Engineering</td>
<td>6 (BI*)</td>
</tr>
<tr>
<td>CS 550</td>
<td>Algorithmics</td>
<td>6 (BI*)</td>
</tr>
<tr>
<td>CS 560</td>
<td>Large Scale Data Management</td>
<td>6 (BI*)</td>
</tr>
<tr>
<td>CS 600</td>
<td>Model-driven Development</td>
<td>6 (BI*)</td>
</tr>
<tr>
<td>CS 660**</td>
<td>Compiler Construction</td>
<td>6 (BI*)</td>
</tr>
<tr>
<td>CS 661**</td>
<td>Parallel Programming</td>
<td>6 (BI*)</td>
</tr>
</tbody>
</table>

* For a detailed description, please see the module catalogue of the respective following degree programs:
  • BI: M.Sc. Business Informatics, [https://www.wim.uni-mannheim.de/studium/studienorganisation/m-sc-business-informatics/](https://www.wim.uni-mannheim.de/studium/studienorganisation/m-sc-business-informatics/)
  • MMM: M.Sc. Mannheim Master in Management, [https://www.bwl.uni-mannheim.de/studium/master/mmm/](https://www.bwl.uni-mannheim.de/studium/master/mmm/)

**Additional offer to the Examination Regulations.
Structure of the M.Sc. Program

Data Management

<table>
<thead>
<tr>
<th>Module no.</th>
<th>Name of module</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 664**</td>
<td>Blockchain Security</td>
<td>6 (BI*)</td>
</tr>
<tr>
<td>CS 666**</td>
<td>Digital Forensics and Incident Response</td>
<td>6 (BI*)</td>
</tr>
<tr>
<td>IE 650</td>
<td>Knowledge Graphs (formerly Semantic Web Technologies)</td>
<td>6 (BI*)</td>
</tr>
<tr>
<td>IE 670</td>
<td>Web Data Integration</td>
<td>6 (BI*)</td>
</tr>
<tr>
<td>IE 683</td>
<td>Web Data Integration Project</td>
<td>6 (BI*)</td>
</tr>
<tr>
<td>IS 540</td>
<td>Management of Enterprise Systems</td>
<td>6 (MMM*)</td>
</tr>
<tr>
<td>IS 556</td>
<td>Public Blockchains</td>
<td>6 (MMM*)</td>
</tr>
</tbody>
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  • BI: M.Sc. Business Informatics, [https://www.wim.uni-mannheim.de/studium/studienorganisation/m-sc-business-informatics/](https://www.wim.uni-mannheim.de/studium/studienorganisation/m-sc-business-informatics/)
  • MMM: M.Sc. Mannheim Master in Management, [https://www.bwl.uni-mannheim.de/studium/master/mmm/](https://www.bwl.uni-mannheim.de/studium/master/mmm/)

**Additional offer to the Examination Regulations.
Structure of the M.Sc. Program

Data Analytic Methods

M.Sc. Business Informatics
- Network Analysis
- Machine Learning
- Data Mining I

M.Sc. Mathematics in Business and Economics
- Mathematics & Information
- Computational Finance
- Optimization

M.A. Political Science
- Advanced Quantitative Methods

M.A. Sociology
- Longitudinal Data Analysis
- Research Design
- Cross Sectional Data Analysis
Structure of the M.Sc. Program

Responsible Data Science

<table>
<thead>
<tr>
<th>Module no.</th>
<th>Name of module</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 652</td>
<td>Data Security and Privacy</td>
<td>6 (BI*)</td>
</tr>
<tr>
<td>CS 718</td>
<td>AI and Data Science in Fiction and Society</td>
<td>4</td>
</tr>
<tr>
<td>AC 654</td>
<td>Additional Course – Responsible Data Science</td>
<td>Max. 18</td>
</tr>
<tr>
<td></td>
<td>only as part of Responsible Data Science not as Seminar</td>
<td></td>
</tr>
<tr>
<td>DS 203</td>
<td>Responsible AI: Conceptual Foundations, Methods and Applications</td>
<td>6</td>
</tr>
</tbody>
</table>

* For a detailed description, please see the module catalogue of the respective following degree programs:
  • BI: M.Sc. Business Informatics, [https://www.wim.uni-mannheim.de/studium/studienorganisation/m-sc-business-informatics/](https://www.wim.uni-mannheim.de/studium/studienorganisation/m-sc-business-informatics/)
  • MMM: M.Sc. Mannheim Master in Management, [https://www.bwl.uni-mannheim.de/studium/master/mmm/](https://www.bwl.uni-mannheim.de/studium/master/mmm/)

**Additional offer to the Examination Regulations.
Projects and Seminars

PLEASE NOTE:
Each student MUST take a Seminar and Scientific Research as well as a Team or Individual Project.
Projects and Seminars - Team Project

- 12 ECTS, 1 or 2 semesters
- **Presentation**: at 1:45 pm on February 14
- Registration: portal² “Team Projects Master Wifo & MMDS”
- Registration will start on February 14, 3 pm. You can register until February 18 11:59 pm
- Registration is possible AFTER the presentation of the new Team Projects!
Projects and Seminars

Scientific Research Course

• 2 ECTS

• Block seminar during the semester or in lecture-free period

• Offered several times a year

• Dates will be announced via mailing list
<table>
<thead>
<tr>
<th>Module no.</th>
<th>Name of module</th>
<th>Offered</th>
<th>Language</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 701</td>
<td>Selected Topics in Algorithmics and Cryptography</td>
<td>Irregular</td>
<td>E</td>
<td>4</td>
</tr>
<tr>
<td>CS 704</td>
<td>Master Seminar Artificial Intelligence</td>
<td>Irregular</td>
<td>E</td>
<td>4</td>
</tr>
<tr>
<td>CS 707</td>
<td>Seminar Data and Web Science</td>
<td>Irregular</td>
<td>E</td>
<td>4</td>
</tr>
<tr>
<td>CS 708</td>
<td>Seminar Software Engineering Prof. Atkinson</td>
<td>Irregular</td>
<td>E</td>
<td>4</td>
</tr>
<tr>
<td>CS 709</td>
<td>Seminar Text Analytics</td>
<td>Irregular</td>
<td>G/E</td>
<td>4</td>
</tr>
<tr>
<td>CS 710</td>
<td>Selected Topics in Data Science</td>
<td>Irregular</td>
<td>G/E</td>
<td>4</td>
</tr>
<tr>
<td>CS 715</td>
<td>Large-Scale Data Integration Seminar</td>
<td>Irregular</td>
<td>E</td>
<td>4</td>
</tr>
<tr>
<td>CS 716</td>
<td>IT-Security</td>
<td>Irregular</td>
<td>E</td>
<td>4</td>
</tr>
<tr>
<td>CS 719</td>
<td>Seminar on Process Analysis</td>
<td>Irregular</td>
<td>E</td>
<td>4</td>
</tr>
</tbody>
</table>
## Seminars

<table>
<thead>
<tr>
<th>Module no.</th>
<th>Name of module</th>
<th>Offered</th>
<th>Language</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 720</td>
<td>Uncertainty Estimation</td>
<td>Irregular</td>
<td>E</td>
<td>4</td>
</tr>
<tr>
<td>CS 721</td>
<td>Seminar Data-Science I</td>
<td>Irregular</td>
<td>E</td>
<td>4</td>
</tr>
<tr>
<td>CS 722</td>
<td>Seminar Ethical Aspects of AI</td>
<td>Irregular</td>
<td>E</td>
<td>4</td>
</tr>
<tr>
<td>CS 717</td>
<td>Master Seminar on Computer Vision</td>
<td>FSS</td>
<td>E</td>
<td>4</td>
</tr>
<tr>
<td>IE 704</td>
<td>Seminar AI Systems Engineering</td>
<td>Irregular</td>
<td>E</td>
<td>4</td>
</tr>
</tbody>
</table>
Seminars

- Registration for CS-seminars via Portal² until February 12
- You have to choose at least 3 priorities
- IE-seminar has different application process
- BUT: consider the requirements of each seminar
Study abroad

All students have the opportunity to study abroad for one or two semesters without paying tuition fees.
What for?

Don’t miss the unique opportunity to

- immerse yourself in another culture
- overcome challenges and gain new soft skills
- experience high-class education systems
- brush up your foreign language skills
- form lifelong friendships and international networks
- boost your CV and your career opportunities
- ...
Where to?

- with over **450 partner universities in 60 countries** you can choose from a variety of universities all around the globe

- 70 of those are faculty-owned partner universities

- even lesser-known regions can become exciting destinations for your exchange!
First steps

– take a look at the different application deadlines, depending on your program of study and your host country

– take part in one of the mandatory Introductory Study Abroad Sessions right at the beginning of your studies

– look for suitable partner universities all around the globe
Application Deadlines

Exchange destinations and application deadlines are divided into two regions:

<table>
<thead>
<tr>
<th>Region</th>
<th>Deadline</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overseas North &amp; South</td>
<td>15 October 2024</td>
<td>fall 2025 or spring 2026</td>
</tr>
<tr>
<td>Europe (without Russia)</td>
<td>31 January 2025</td>
<td>fall 2025 or spring 2026</td>
</tr>
<tr>
<td>Europe (remaining places)</td>
<td>30 April 2025</td>
<td>fall 2025 or spring 2026</td>
</tr>
</tbody>
</table>

Table for Master degrees starting in the spring term 2024.

If you want to travel to Overseas North in fall semester of 2025 or spring semester of 2026, you have to apply by 15 October 2024!
Contact

Juliane Roth, M.A.
Departmental Exchange Coordinator

University of Mannheim
School of Business Informatics and Mathematics
B 6, 26
Gebäudeteil B – Room B 1.05
68159 Mannheim

Consultation hour(s):
by appointment via email

Phone: +49 621 181-2340
Fax: +49 621 181-2423
E-mail: roth@wim.uni-mannheim.de
Important Webpages

• wim.uni-mannheim.de
  – Info about study organization (module catalogue, examination regulation, contacts, ...)

• uni-mannheim.de/dws
  – Info about professors from our faculty related to data science
  – Detailed course information (regarding content and organization)

• https://fim.uni-mannheim.de/
  – Student association Homepage
Questions?