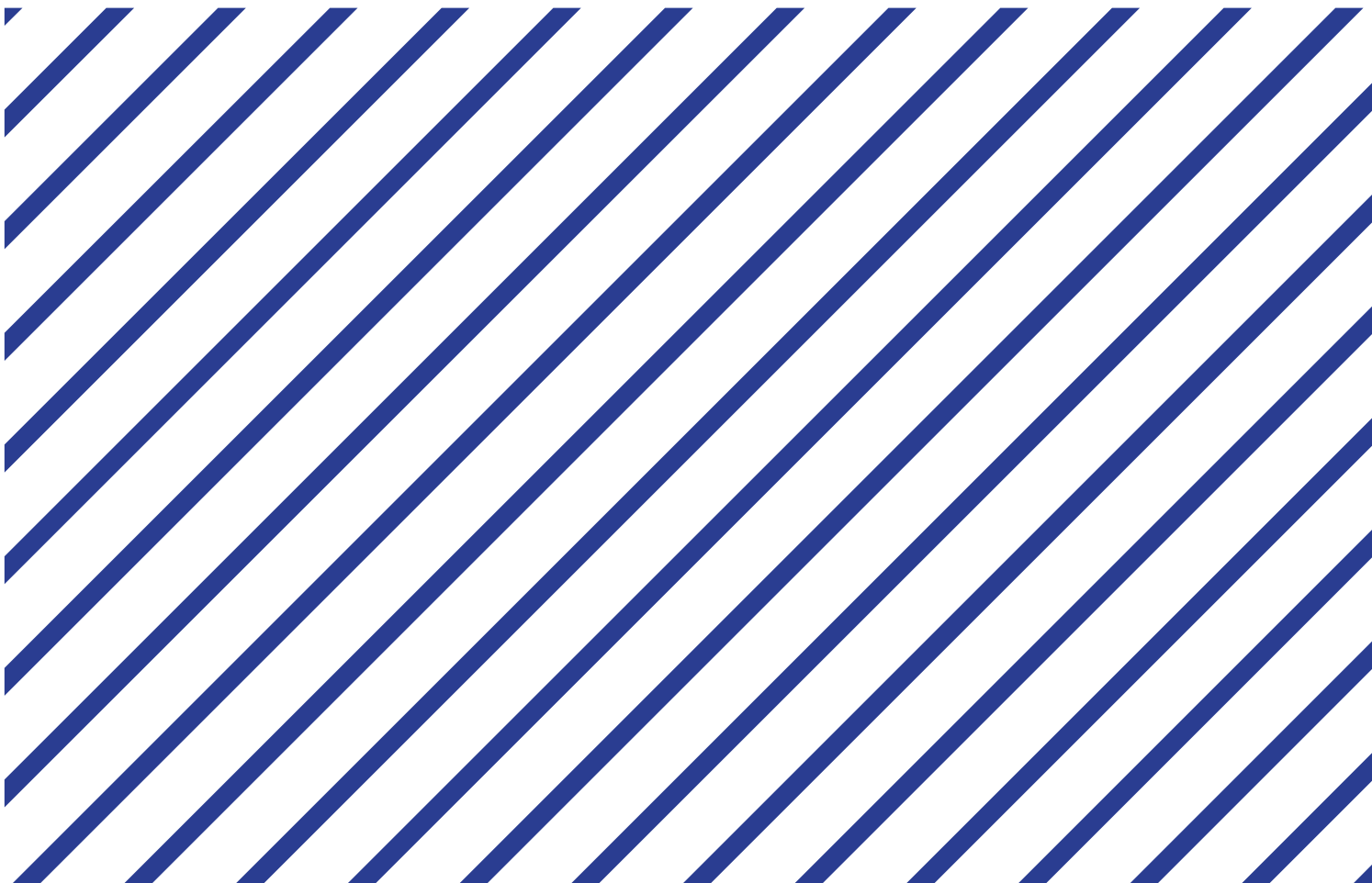




FH MÜNSTER  
University of Applied Sciences



FB Wirtschaft  
Münster School of Business

# Guidelines for students

from "Digital Native" to "AI Native"

Working with *generative artificial intelligence*  
at the Münster School of Business (MSB)

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We are convinced that generative artificial intelligence (gAI) will have a permanent place in your future working life. That's why we want you to learn how to use this technology in a critical and reflective way in your studies at MSB and apply it in practice.

### Key points of these guidelines:

- Since gAI will be part of future professional practice, the use of gAI is generally permitted at the Münster School of Business (MSB) at Münster University of Applied Sciences.
- Generative AI, especially language models, is not designed to reproduce reliable facts as they have not been trained for this purpose. Therefore, their output should not be used as a source of reliable information, like an academic article, data from a reliable government agency, or an edited news article from a trusted source.
- When using gAI in examinations, it is recommended that the intended use and purposes of gAI are discussed and agreed with the lecturer in advance. Despite the general approach of the department supporting the careful use of gAI, any lecturer is also permitted to prohibit the use of gAI for examinations ("opt-out procedure"), and the lecturer has the final decision for their own module.
- As a general guideline, the following applies: In the case of written work, information on the use of KI must be provided. The unmarked copying and use of texts that were created using gAI may constitute an attempt to deceive. When using gAI in bachelor or master theses:
  - prepare a **declaration of independence** (affidavit) in consultation with the thesis supervisor and
  - write a 1-2 page **clarifying statement of gAI use** (see example in the appendix).
- When using gAI, do not use any personal data and bear in mind that many documents and texts are subject to copyright and may not be uploaded. Only use the teaching material from courses in gAI systems if it has been approved for this use by the lecturer. **Make sure that copyright-protected or confidential information is not used to train the models. (To do this, set the "Improve the model for everyone" option to "off" in the "Data control" settings area of ChatGPT, for example).**
- Recommended sources for using the gAI for your studies include the **Confluence page of the Wandelwerk** at Münster University of Applied Sciences and the **KI-Campus**.

## **1 Introduction**

### **1.1 Fundamentals of generative artificial intelligence**

With the introduction of ChatGPT, solutions from the field of generative artificial intelligence (gAI) are freely accessible and are the subject of public discussion. Generative AI is software that generates new and unique content through user queries (prompts). This can be any form of text (e.g. ChatGPT, Perplexity) as well as images (e.g. Midjourney), presentations (e.g. Gamma), audio (e.g. AudioGPT), video (e.g. Synthesia). In particular, software that can be categorized as so-called large language models (LLM) has led to intensive discussions regarding the question of how teachers, researchers and students should deal with this technology. This is because questions of copyright and data protection arise, particularly in examinations, but also in numerous other contexts. However, this also has consequences for the assessment of examinations.

### **1.2 Goals of these guidelines**

The introduction of gAI has led to an ongoing discussion in research and teaching as to what conclusions can be drawn, particularly regarding examination performance, and how questions of competence orientation will be structured in the future. This guideline provides information for you as a student at Münster School of Business and explains what you need to consider when using software with gAI, particularly in the context of examinations. The guidelines were created by the MSB's AI working group and is continuously updated. The ongoing discussion of the topic is necessary because the field of gAI is developing dynamically and rapidly.

### **1.3 The basic approach of the MSB regarding gAI**

There is no general ban on gAI at the MSB. In principle, MSB is in favor of proactively integrating such tools into teaching and research in a critically reflective manner. This is because software with gAI will be an important part of the future professional practice of graduates of the Faculty of Business. Therefore, the critically reflective use of gAI is an important professional skill we want our students to develop.

As a consequence of the possible use of gAI, it is to be expected that unsupervised written work will be supplemented by an oral examination in order to validate in-depth understanding.

## **2 Using generative artificial intelligence in examinations**

### **2.1 Why doesn't it make sense to ban generative AI in teaching?**

It is the responsibility of universities to promote and critically monitor innovations and technical/digital developments such as gAI. This is particularly relevant as gAI will be an everyday tool in almost all areas of work for business graduates in the future. A general ban on gAI would also affect other

technical tools and software that are already used as a matter of course and which will also be based significantly more on gAI in the future, e.g. the MS Office products Word®, PowerPoint®, Excel®, etc.

## 2.2 What can generative AI be used for?

The field of application for gAI has expanded rapidly in a short space of time and gAI can already support everyday life. It is not just about text generation, as with ChatGPT or Perplexity, but also about speech, image and video generation. Applications of gAI include:

- Linguistic improvement of texts,
  - Feedback on written texts according to predefined criteria,
  - Translations between different languages,
  - Create to-do lists and schedules,
  - Comparisons in a tabular form,
  - Pool of ideas for any topic,
  - Create images according to your own specifications (e.g. *Midjourney*, *DALL-E*)
  - Voice and video production (*Synthesia*)
- ... and much more

A self-study unit that shows you how you can use artificial intelligence for your studies is currently under development. As soon as it is published, the learning unit will be linked here.

## 2.3 Using generative AI in a critically reflective way

A critically considered use of gAI systems requires an understanding of the limitations and risks of the technologies used. It should be borne in mind that the limitations do not apply across all systems, but can differ depending on the system and are subject to dynamic development.

The following limitations (among others) are currently known, which are deliberately highlighted in red below to raise awareness:

- The statistical orientation and the lack of semantic understanding of the gAI systems can lead to limitations with regard to the factual accuracy and reliability of the information provided (Friedrich, Tobor & Wan, 2024; Theisen, 2023).
- The timeliness and scope of the database used to train the gAI systems determine the timeliness of the generated outputs (Salden, 2023).
- The data basis of gAI systems is heterogeneous and is not based exclusively on scientifically sound sources (Salden, 2023).
- Users are not given any insight into which works are used in which way (e.g. word-for-word reproduction of text material) (Salden, 2023).
- When training data is used by the gAI systems, no differentiation is made between primary and secondary literature.
- gAI systems also reproduce prejudices and biases if these are contained in the training data (Salden, 2023).

These limitations justify the need for a critical and reflective approach to gAI systems. An unreflective adoption of outputs without examination and classification therefore does not meet the requirements of scientific practice.

## 2.4 In which examinations do I have to indicate the use of generative AI?

When using AI in examinations, it is recommended that students and lecturers discuss and agree in advance on the intended use and purposes of AI. Despite the basic attitude of the department, the teacher is also permitted to prohibit the use of AI for the examination ("opt-out procedure"). Each lecturer ultimately can decide if, and how AI can or cannot be used in their module.

For a general approach, the following applies: In the case of written work, information on the use of gAI must be provided. The unmarked copying and use of texts created using gAI can constitute an attempt to cheat. It is therefore highly relevant to indicate the use of gAI in examinations so that no accusation of cheating can arise (Salden 2023). The use of gAI requires coordination with the supervising lecturer, especially for **bachelor and master's theses**, as they assess independence and performance. In general, you should therefore consult with your lecturer or supervisor about the intended use of gAI in an examination, especially including theses.

**Important:** Copying and using texts or content created by gAI without indicating the use of gAI may constitute an attempt to deceive. Directly or indirectly (paraphrased) created passages should be identified in the statement (see chapter 2.5). The statement should then be referenced accordingly in the text.

## 2.5 How and where do I indicate that I have used content created by generative AI in an examination?

In addition to the declaration of independence (affidavit), a statement of 1-2 pages should be written in which the student critically reflects on the use of the technology. The statement contains specific information about which technology was used in which chapters, which tasks were supported by it and in which areas the use was not beneficial. You should disclose at least the following content in full:

- *Which version of which software was used?*
- *For which parts of the text, illustrations, photos or similar components of the work was the software used?*
- *What specific tasks were performed by the software and was the use of the technology for this task of added value?*

A template is attached to this document for orientation and structuring of the statements. Lecturers can specify further information requirements.

In addition, for reasons of good scientific practice (transparency), the use of gAI in the acquisition of scientific knowledge should be included in the methods section (if available) of the written work. For

example, the comparison of one's own research activities (example: a mind map for literature searches) with the results of the gAI may contribute to the knowledge process and thus underpin or improve the quality of the knowledge gained so far. The use of gAI should also be plausibly and comprehensibly explained and methodologically justified in the methods section. The responsibility for the quality of the results of gAI lies with you as the author of examinations or other submitted texts or deliverables.

## 2.6 Application examples for generative AI: what works and what should be avoided

This chapter uses specific application examples to provide practical recommendations for the use of generative AI. The color green stands for promising approaches, while red indicates critical points and risks.

- You can use generative AI as a "learning buddy" to summarize core content of a lecture, create a mind map for specific topics or develop test questions that identify your individual learning needs (if the teaching material has been released for use, see next point).
- Only use the teaching material from courses in generative AI if it has been approved for this use by the lecturer (the background to this is copyright, see chapter 3.2). **Make sure that it is not used to train the models. (To do this, set the item "Improve the model for everyone" to "off" in the "Data control" settings area of ChatGPT).**
- Remember to critically reflect on and review the answers provided by generative AI. The technology currently tends to output erroneous or inaccurate information (so-called hallucinations). Generative AI, especially language models, are not designed to reproduce reliable facts as they have not been trained for this purpose. Therefore, their output should not be used as a source of reliable information.
- Information produced by generative AI is generally not suitable for citation, as often no clear scientific evidence is provided. A negative example would be: *"In the last two decades, cloud technology has developed rapidly, leading to the emergence and proliferation of IaaS (Infrastructure as a Service), PaaS (Platform as a Service) and SaaS (Software as a Service) (ChatGPT prompt1)."* In such a case, a scientific source such as a book or journal article should be cited instead.

## 2.7 Where can I find out more about generative AI?

There are various sources that can be used to obtain comprehensive information about gAI and how it works, their possible applications and the underlying technology. Here are some recommended sources:

**Wandelwerk:** The Wandelwerk of Münster University of Applied Sciences provides a **comprehensive overview in Confluence** of how gAI works and explains how it can be used for studying and teaching.

**KI-Campus:** On the free learning platform KI-Campus, which is funded by the BMBF, you will find a wide range of courses, information and teaching materials on the subject of artificial intelligence and chatbots such as ChatGPT. Various interactive courses are offered on <https://moodle.ki-campus.org/> to help you develop a deeper understanding of AI models and their application in practice. The following course is particularly recommended: **Generative AI as a co-pilot in everyday school and university life**

**Official OpenAI website:** The **OpenAI website** provides detailed information about ChatGPT and related technologies such as GPT-4, with official documentation, announcements, research reports and blog posts explaining how the model works, updates and how it can be used in different domains.

## 3 Legal aspects

### 3.1 Can problems arise with regard to data protection when using generative AI?

It is strongly recommended that you do not use any personal information in gAI. So be careful what data you enter here for personalization: This is because the personalization of gAI in particular is shown as an advantage when using them. The use of gAI is currently not mandatory for the processing of examinations if this requires the entry of personal data. Particular care must therefore be taken to ensure that no data of fellow students or staff members is entered into software with gAI. It is important to know that the data you enter will be used for the further development (training) of the software. With many providers, you can switch off the use of your entries for further development: e.g. with ChatGPT under **this link**. However, under no circumstances should this be interpreted as legitimizing the careless entry of personal data into the software.

When entering **research data** in the context of theses or research projects, the utmost sensitivity must be exercised with regard to data protection. We strongly advise against using your own research data when using gAI, e.g. to create summaries (e.g. transcripts of qualitative interviews). Aspects of the GDPR must be checked for all providers of gAI.

### 3.2 Can problems arise in relation to copyright when using generative AI?

Yes, copyright infringements can occur. In principle, German copyright law protects works that are characterized by a human-creative influence. Software with gAI cannot be an author, as the human-creative activity in the sense of copyright protection is missing. It is therefore not sufficient to have a text created by a prompt in order to have a text protected by copyright. In individual cases, however, copyright protection can arise if a significant degree of individual contribution is made to a text, e.g. through highly differentiated and controlling prompts and clearly human post-editing.

**It is particularly important to note** that you as a user can infringe the copyrights of others: This may be the case if the software has been trained with copyrighted works and these are unknowingly taken over and published. This also applies to images created by gAI, which may be very close to

copyrighted material. There are also special features with certain providers: For example, the "Gamma" software generates text and images in addition to slide designs. Gamma also inserts images from the Internet. If these are then used in a presentation without the corresponding source, this can be interpreted as plagiarism.

## **4 Who can I contact if I have questions or problems when using generative AI?**

In principle, the lecturer of each course is initially available as a contact person. If you have general questions, concerns or problems about this topic, you can contact the AI working group of the MSB: michael.hewing@fh-muenster.de. The topic is very dynamic and requires continuous consideration. We in the MSB, like all educational institutions, are learning every day and are particularly grateful for feedback from students.

### **Members of the AI working group of the Department of Economics**

Michael Bückner, Norman Lahme-Hütig, Christopher Buchmüller, Sarah Kruse, Reiner Kurzhals, Christoph Heinbach, Michael Hewing

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Melina Gerwing, Janina Gersie, Markus Münch, Christopher Niehues, Sven Kernebeck

## **Literature**

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## Appendix: Example of a statement

The following matrix can be used to identify and make transparent the use of AI by students for a written paper (e.g. thesis). Two aspects of use should be taken into account:

**Task:** For which task in the context of writing the thesis were AI tools used?  
**Type/intensity of support:** What type of support was used by the AI?

|                         |                      | Type/intensity of support |          |         |          |             |          |          |
|-------------------------|----------------------|---------------------------|----------|---------|----------|-------------|----------|----------|
|                         |                      | Inspiration               | Research | Summary | Analysis | Translation | Creation | Revision |
| Task/part of the thesis | Research question    |                           |          |         |          |             |          |          |
|                         | Literature research  |                           |          |         |          |             |          |          |
|                         | Selection of methods |                           |          |         |          |             |          |          |
|                         | Research             |                           |          |         |          |             |          |          |
|                         | Structure            |                           |          |         |          |             |          |          |
|                         | Writing the paper    |                           |          |         |          |             |          |          |
|                         | Tables               |                           |          |         |          |             |          |          |
|                         | Illustrations        |                           |          |         |          |             |          |          |
|                         | Bibliography         |                           |          |         |          |             |          |          |

### Explanations

#### Tasks

- Research question: Development of the research question(s) of the thesis or hypotheses to be addressed in the thesis, e.g. identification of research gaps
- Literature research: search, analysis, evaluation etc. of literature in a structured literature research process
- Selection of methods: Selection of the research method to investigate the research question(s)
- Research: Conducting research, e.g. data evaluation, literature research, evaluation of qualitative interviews, etc.
- Outline: Creating the outline of the paper
- Writing the thesis: Writing the individual chapters of the thesis
- Tables: Creating the tables within the thesis
- Illustrations: Creating the tables within the thesis
- Bibliography: Creating the bibliography for the thesis

#### Type/intensity of support

- Inspiration: AI tools are used to collect ideas ("brain storming"), develop examples
- Research: AI tools are used to research facts or literature
- Summary: AI tools are used to summarize longer texts, e.g. to capture the essence more quickly
- Analysis: AI tools are used to analyze data (qualitative or quantitative data), for the structured evaluation of texts, e.g. searching for specific keywords, etc.
- Translation: AI tools are used to translate foreign-language texts into the language of the thesis or to translate your own formulations, e.g. into English
- Creation: AI tools are used to formulate chapters/sections of the thesis
- Revision: AI tools are used to revise the thesis, e.g. to check and correct spelling and grammar, improve your own wording