Guidelines on the use of artificial intelligence tools in assessments at Hochschule Fresenius

Presidium of Hochschule Fresenius, October 2024

Contents

1. Preface

Hochschule Fresenius is a higher education institution that is open to innovation and committed to adopting progressive technological developments in both the education of students and the assessment process. As a university of applied sciences, we prepare our students for careers in which artificial intelligence (AI) is set to play an ever-greater role, both in theory and practice. Moreover, using AI-related applications will be a core competency in many industries in the future. For that reason, we see it as our responsibility to give our students the skills and confidence to engage with AI tools in a legal and ethical manner and with academic integrity.

At the same time, we must develop legally compliant measures for the assessment process that provide both students and lecturers with reliable guidelines on the use of AI. These guidelines are therefore designed to answer the most pressing questions. In the following, the term "AI tools" refers in particular to generative AI, for example the text generation chatbot ChatGPT. It also includes tools such as Bing, Stable Diffusion, Dall-E, Midjourney, etc. Specifically, applications that access large language models or text-to-image models (or similar).

Even in the era of artificial intelligence, it is imperative that students conduct assessments independently and in compliance with examinations regulations. It follows that the use of AI must be regulated in such a way that it can be distinguished from scenarios involving ghostwriting (see 2.1). We have therefore chosen an approach that takes account of the particular responsibility at the core of academic freedom (see 2.2): The use of AI tools for at-home assessments is therefore not forbidden, and proof of the student's independent work must be clear and incontrovertible. For this reason, we have established binding citation requirements. In addition, all documents and reference texts generated by the AI tool must be submitted along with the at-home assessment. All lecturers are free to prohibit the use of AI tools in their own assessments. Individual prohibitions of this kind must be communicated to both the students and the responsible Examinations Office in writing.

In addition to the following guidelines on assessments, we have also provided a list of frequently asked questions (FAQs). If you have any urgent questions that have not yet been, please contact: ki@hs-fresenius.de. Developments in the field of AI are dynamic, and these guidelines will be updated as required on a regular basis. Naturally, we will notify you of any changes.

2. Assessment regulations

2.1. General recommendations for the completion of assessments

The issue of AI in assessments is subject to intensive discussion in the education sector. One key question is whether the use of generative AI, such as ChatGPT, in university assessments is compatible with existing regulations. The respective examinations regulations already provide a clear legal position.

(1) Assessments are to be completed by the individual student, independently, on their own, and without unauthorized outside help.

(2) "Rule of thumb": Any unauthorized outside help by a third party also includes use of an AI tool. Just as it would be inadmissible to hire a ghostwriter to write an assessment, it is equally inadmissible to use an AI tool for this purpose without citing it as a source.

(3) In the case of cheating or attempted cheating, Hochschule Fresenius may take any appropriate measures to determine the facts. To do this, Hochschule Fresenius may employ software to detect the use of AI-generated assessments. Hochschule Fresenius reserves the right to conduct these types of investigations even after the assessment has been graded. In cases of proven cheating, it is possible that a student's assessments may subsequently be disallowed or the degree revoked.

(4) If there is evidence of the inadmissible use of AI, the assessment candidate may be questioned in order to verify that they completed their assessment independently. Examiners are required to report any cases of suspected cheating to the Examinations Office.

(5) The consequence of cheating or attempted cheating is a "fail" grade on the assessment. Use of technological aids is generally considered a particularly severe form of cheating. Engaging in this behavior can result in penalties such as permanent failure of the assessment, even if the student is not on their last attempt. This will result in termination of the student's participation in the study program and a bar on enrollment at any other university. Hochschule Fresenius will implement all possible penalties in order to prevent misconduct. These decisions will be made by the examination board.

2.2. Special regulations for the admissible use of AI at Hochschule Fresenius

(1)   At Hochschule Fresenius, AI tools are generally considered permitted and admissible aids unless the examiner specifically prohibits the use of AI.

(2)   The use of AI is subject to certain regulations that will be set out in detail in the following sections.

(3)   Even admissible use of AI can contravene the policy that students must produce independent work. Hochschule Fresenius reserves the right to investigate whether student work was completed independently.

(4)   It is crucial that students can prove that their work was produced independently. When use AI is permitted, students must be able to demonstrate independent work in accordance with the following policy (see examples at the end of this document for comparison):

   (a)   In the body text: Citation of the AI source in the form of a footnote or in-text citation, depending on the type of citation normally used in the study program in question (footnote or in-text citation). In the case of ChatGPT, the author is the company OpenAI. Students must also differentiate between direct and indirect quotes, which must be indicated accordingly using the appropriate punctuation /format.

   (b)   List of references: Students may compile a separate AI reference list (following the body text and in addition to the works cited) in which they list the AI sources in the order in which they appear in the text. The citations must include author (e.g. OpenAI), year, tool including version, link, access date, page number of appendix (see next point).

   (c)   Appendix: Students may create a numbered appendix (see previous point) that includes the original text generated by the AI that is cited directly or indirectly in the body text. The prompt must be visible in the original text.

   Both the input from the students and the output of the tool must be clearly presented and organized for the examiners. If the student fails to comply with these stipulations, the assessment cannot be evaluated and is considered failed because it is not possible to verify whether the assessment constitutes independent work in accordance with the assessment policy. The faculties of Hochschule Fresenius will provide students with examples of proper citation (see appendix).

(5)   If a lecturer has explicitly prohibited the use of AI in their assessments, use of AI tools constitutes attempted cheating.

3. Assessment-related questions about the use of AI

Which forms of assessment are subject to the regulations listed above?

These regulations apply to so-called at-home assessments, including semester papers, project work, final theses or similar formats. The presentation materials used in assessments (e.g. PowerPoint presentations) are also subject to these regulations.

How will I know whether my lecturer has prohibited the use of AI tools in assessments?

Generally, use of AI is permitted, provided that students include all AI reference text and cite AI sources correctly. Lecturers, however, have the right to prohibit the use of AI tools. This decision must be made by the particular lecturer and communicated to students in writing. The responsible examination office must also be informed in written form.

If I am permitted to use AI, do I have to cite my AI sources?

Students must always make it clear when they have used AI and attach the complete output of the tool in their appendices. In the body text, AI sources can be cited as a footnote or in-text citation depending on the format generally used by the student's respective faculty in accordance with common practice at Hochschule Fresenius.

Will my grade by affected if an AI tool that I have cited correctly provides me with incorrect information or fictional sources?

It is well known that AI tools have weaknesses in certain areas, for example sources. Students accept sole responsibility for the content and sources contained in their assessments. Even if the use of AI tools is permitted, students are responsible for carefully checking the output of the tool before including it in their assessment (e.g. by consulting multiple sources).

Is the use of AI-generated text considered plagiarism?

In accordance with intellectual property law, inputting third-party text into AI systems does not infringe on third-party copyrights or related rights. However, if AI-generated text, musical compositions, images, or videos are very similar to original works, using this content would infringe on intellectual property rights. Students must therefore always check whether content generated by the AI tool constitutes an inadmissible, non-independent adaptation of a protected original work. Use of an AI-generated text can be considered plagiarism in this case. Students always accept full responsibility for the assessments they submit and are subject to all potential consequences as stipulated in the respective regulations. Students should not simply use AI tools without engaging with the content or demonstrating independent work and thought.

How much AI-generated text am I allowed to use in my assessment?

In order for examiners to grade student work, work must be completed independently, with or without the use of AI: A semester paper that uses and cites one single source for most of the body text would

receive a very low grade even without the use of AI. The source is cited properly, but it is questionable whether the assessment constitutes independent work. For this reason, AI tools used in assessments should only be included to the same extent as other sources. It must be possible for examiners to evaluate the student's independent work.

What kinds of things are considered use of AI?

The regulations on the use of AI tools not only include text-generating AI tools such as ChatGPT; they also extend to generative AI tools that produce images, music, video, etc. The type of use is subject to the same regulations that apply to other sources; this also applies to outlines. Research on its own is treated in the same way as research involving other sources and does not have to be cited specifically.

Does Hochschule Fresenius use software to detect text that may have been generated by AI?

Hochschule Fresenius already regularly implements software for detecting cheating using AI. Use of this software will likely increase in the future. It is also possible that assessments may be checked retrospectively, and cheating may result in assessments being disallowed.

What are the rules for the use of text-based AI tools in written exams?

Technological aids are generally prohibited for written exams that take place in the classroom. Even bringing a smartphone to an exam may constitute attempted cheating. As AI tools require technological devices, these tools are not permitted in written exams. The same applies for both in-person and online written exams. However, usage in exams can still be permitted by the examiner, for which the necessary AI tools and technical aids must be declared as authorized resources.

How long will these regulations apply?

We are continuously monitoring the use of AI in the assessment process at Hochschule Fresenius, both in terms of the legal aspects and also developments in the education system as a whole. Technological advancement is rapid, and these measures may need to be adjusted as the situation continues to evolve. We will, of course, provide all necessary information in case of any changes.

What is the exact procedure in case of suspicion, or what is meant by 'questioning of the examination candidate'?

There is no fixed standardized procedure that must necessarily be applied in all cases of suspicion. The possibility of questioning the examination candidate does not refer to an oral examination in the context defined by the examination regulations, but to an interrogation or conversation with the examination candidate, which must be conducted by the examiner in the presence of an assessor and documented. The aim of this interrogation/conversation is to determine whether AI was used as an unauthorized aid in the creation of the examination performance. That is, this interrogation/conversation is not intended for assessing the performance and thus generating a grade. If it is determined during the interrogation/conversation that there has been unauthorized use of AI, this constitutes an attempt to deceive and therefore results in an assessment of 'fail' (n.b. - not passed).

4. Sources

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Limburg, A., Salden, P., Mundorf, M., & Weßels, D. (2022). Plagiarismus in Zeiten Künstlicher Intelligenz In: ZHFE - Zeitschrift Für Hochschulentwicklung, 17(3), 91–106. https://doi.org/10.3217/zfhe-17-03/06 (13.08.2023).

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Salden, P., Lordick, N., & Wiethoff, M. (2023). KI-Basierte Schreibwerkzeuge in der Hochschule - Eine Einführung. In P. Salden & J. Leschke (Hrsg.): Didaktische und rechtliche Perspektiven auf KI-gestütztes Schreiben in der Hochschulbildung (4–21). https://doi.org/10.13154/294-9734 (13.08.2023).

Attachment: Examples of the Implementation of the Rules at the Departments of HSF

Note: In essence, we adhere to the citation rules for ChatGPT according to APA, which we have adapted to the citation rules of the departments of Hochschule Fresenius.

Department Wirtschaft und Medien – Business School and Media School

Case 1: Text Quotation

(The text generated by NextGeneration:AI is located in the appendix, see page 15 of this document.)

Example text from the student's work that indirectly references the original:

By applying gamification elements, the release of various neurotransmitters can be promoted. The extent to which each transmitter is released depends heavily on the type of application. Primarily, dopamine, serotonin, norepinephrine, endorphins, oxytocin, and acetylcholine should be mentioned in this context[1].

Footnote:

[1] Vgl. Carl Remigius Fresenius Education Group [2024], Anhang S. 15.

Entry in the AI Directory:

Carl Remigius Fresenius Education Group [2024]
     NextGeneration:AI (GPT 3.5 Turbo) [Large language model]. https://nextgeneration-ai.crf-edu-cation.com/chat, see appendix p. 15.

Case 2: Image Quotation

(The image generated by Stable Diffusion is located in the appendix, see page 16 of this document.)

Image caption below the illustration:

(Source: Stability AI [2023], appendix p. 16)

Entry in the AI Directory:

Stability AI [2023]
     Stable Diffusion (XL Playground) [text-to-image model].
     https:// https://stablediffusionweb.com/, see appendix p. 16.

Department Wirtschaft und Medien – Psychology School

Note: In essence, we adhere to the citation rules for ChatGPT following APA guidelines, which we have customized to fit the citation rules of the departments at Hochschule Fresenius.

Case 1: Text Quotation

(The text generated by NextGeneration:AI is located in the appendix, see page 15 of this document.)

Example text from the student's work that indirectly references the original:

To assess the extent to which an AI tool is biased, it was instructed to list typical occupational combinations of married couples for a short story. It is noticeable that some combinations exhibit stereotypes (doctor and nurse) (Carl Remigius Fresenius Education Group, 2024, appendix p. 15).

Entry in the AI Directory:

Carl Remigius Fresenius Education Group (2024). *NextGeneration:AI* (GPT 3.5 Turbo) [Large language model]. https://nextgeneration-ai.crf-education.com/chat (see appendix p. 15).

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Image caption below the illustration:

(Stability AI, 2023, appendix p. 16)

Entry in the AI Directory:

Stability AI (2023). *Stable Diffusion* (XL Playground) [text-to-image model]. https://stablediffusionweb.com/ (see appendix p. 16).

Department Wirtschaft und Medien – International Business School

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AI Reference List:

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Case 2: Image citation

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Image citation:

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AI Reference List:

Stability AI (2023). *Stable Diffusion* (XL Playground) [text-to-image model]. https://stablediffusionweb.com/ (see appendix p. 16).

Department Design / amd – Citation style I (geistes- / kulturwissenschaftliche Texte) - for students who started their studies before the winter semester 2024/25

Note: In essence, we adhere to the citation rules for ChatGPT following APA guidelines, which we have customized to fit the citation rules of the departments at Hochschule Fresenius.

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Footnote (first note):

[1] Vgl. Carl Remigius Fresenius Education Group: NextGeneration:AI (GPT 3.5 Turbo) [Large language model], (https://nextgeneration-ai.crf-education.com/chat) 2024, appendix p. 15.

Entry in the AI Directory:

Carl Remigius Fresenius Education Group: NextGeneration:AI (GPT 3.5 Turbo) [Large language model], (https://nextgeneration-ai.crf-education.com/chat) 2024, appendix p. 15.

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Image caption below the illustration:

Stability AI, 2023, appendix p. 16

Entry in the AI Directory:

Stability AI: Stable Diffusion (XL Playground) [text-to-image model], 2023 (https://stablediffusionweb.com/), appendix p. 16.

Department Design / amd – Citation style II (betriebswirtschaftliche Texte) - for students who started their studies before the winter semester 2024/25

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Department Design / amd – for students who started their studies in the winter semester 2024/25 or later

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Department Gesundheit und Soziales

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Department Chemie & Biologie

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Case 2: Image Quotation

(von Stable Diffusion generiertes Bild befindet sich im Anhang, siehe S. 16 dieses Dokuments)

Image caption below the illustration:

(Stability AI, 2023, appendix p. 16)

Entry in the AI Directory:

Stability AI (2023). Stable Diffusion (XL Playground) [text-to-image model]. https://stablediffusi-onweb.com/ (see appendix p. 16).

Department onlineplus (olp)

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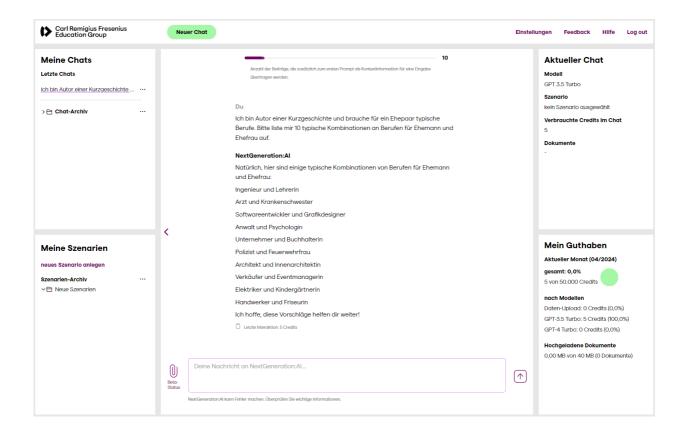
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Anhang/Appendix:

Appendix 1: Carl Remigius Fresenius Education Group, 2024, NextGeneration:AI (GPT 3.5 Turbo) [Large language model].

Appendix 2: Stability AI, 2023, Stable Diffusion (XL Playground) [text-to-image model].