Framework rules for the use of artificial intelligence at CTU for study and pedagogical purposes in Bachelor and continuing Masters studies

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Art. 1 Opening provisions

1.1 As a leading technical university, CTU supports the use of all tools and modern technologies in teaching and the work of its academic staff, provided that such tools are used responsibly and in accordance with the ethical principles set out in the CTU Code of Ethics.

1.2 This document sets out the framework rules for the use of generative artificial intelligence (AI) technologies by teachers and students in bachelor and master study programmes.

Art. 2 Definition of terms

2.1 For the purposes of this document, an AI tool refers to a generative model (typically a neural network) that allows text, source code, schemas, images, sound, video, etc. to be created or modified based on input in the form of context or query. The output answers are dynamically generated based on learned knowledge and context of the query; the results are not selected from a predefined set.

2.2 In the context of this methodological instruction, AI tools are understood to primarily include applications such as ChatGPT, Microsoft Bing, Google Bard, Github Copilot, Midjourney, Stable Diffusion, Jasper, etc. Specific AI tools may employ different systems, learning algorithms, etc.

Art. 3 Ensuring cyber security

3.1 AI lacks the ability to maintain confidentiality and protect personal data.

3.2 None of the AI tools available for use on the Internet (whether for free or for a fee) are run by CTU. All communication between the user and the AI tool is accessible to the tool's operator.

3.3 The use of AI may pose significant cyber risks.

3.4 The most serious risks include the sharing of:
   a. sensitive data from ongoing or completed research
   b. personal data (any information that may lead to the identification of a person – their full name, date of birth, address, email, phone number, personal numbers, bank account numbers, etc.)
   c. data generated as part of contractual research subject to confidentiality agreements
   d. etc.

3.5 When accessing AI tools from computers in the CTU domain, employees and students must comply with the CTU cyber security policy (see the Rector's Order on Cyber Security Policy).

3.6 The use of AI tools to generate deepfake output, primarily with the aim of modifying identity, i.e. changing a person's voice or face in order to mislead another person, for example when sitting online examinations or during telephone or teleconference calls, is prohibited and shall be considered a disciplinary offence.

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Art. 4 Rules for the use of artificial intelligence by CTU students

4.1 Use of artificial intelligence in writing seminar papers (hereinafter referred to as SP) and bachelor's or master's theses (hereinafter referred to as ZP)

Activity	Acceptable	Note
Grammar check	Yes	Grammar checks have been a standard feature of common text editors for years. The use of AI for this purpose does not need to be disclosed.
Text editing, rewording	Yes	AI is capable of generating even extensive text modification suggestions. Such suggestions require critical evaluation as they may completely change the meaning that was originally intended. Not all science disciplines have been used in AI training to the same extent. Thus, Ai may propose a text that may seem logical at first glance but on critical evaluation may be found to lack context and even contain errors. Furthermore, one must always keep in mind that writing technical texts is a skill that students must practice and master. Students should be diligent and learn how to put their own ideas into words. Such cases of AI use must be disclosed in the list of SW used. For citation style recommendations see [6.1] or [6.2].
Literature search	Partially	AI is a good tool when looking for inspiration and gaining basic understanding of a topic. However, it must not be only source of information. Any and all information obtained in this manner must be verified and critically evaluated. AI tools are susceptible to "hallucinations" (making things up) and may work with outdated, unreliable or biased information. Furthermore, searching for information, critically evaluating such information and finding ideas relevant for one's future work are among the key skills that students need to acquire.
Structure of text	Partially	AI is capable of suggesting the structure of a text including division into chapters and even proposed content of each chapter. Such suggestions require critical evaluation. The student is the author of his/her own papers. Every author is responsible for the content of hi/her work, that is: • no important parts are missing, • chapters are organised in a logical order, • the intended meaning is preserved. As the text structure is the backbone of any paper, the use of AI for this purpose must be disclosed in the list of SW used. For citation style recommendations see [6.1] or [6.2].
Thesis, results	NO	These chapters (depending on the context of the paper) should present the results of the author's work. Having the results elaborated or written by someone or something else is inacceptable. If a student is found to be presenting as his/her own work a text that he/she does not understand, cannot explain or does not how he/she reached his/her conclusions, the student will be

		subject to sanctions under the CTU Disciplinary Code.
Searching for authors working on your topic	Yes	AI may be used as a source of inspiration when searching for lesser-known authors; however, you should always check the accuracy of the results or consult the results with your supervisor.
Citations	NO	AI tends to "make up" citations. For examples of fake citations, see [6.3].

4.2 Use of AI in other aspects of study

Activity	Acceptable	Note
Self study	Yes	AI may be used in many areas, including the study of foreign languages.
Consultations	Yes	AI generates different answers at different points in tie. This can help students look at a problem from different perspectives.
Self testing	Yes	Similar to self study. AI can help students learn and test their knowledge
Sitting exams	NO	During examinations, the student is supposed to demonstrate the knowledge he/she has gained, not his/her ability to use modern tools (unless this has been clearly stated by the teacher in advance). Violation of the rules is punishable according to the CTU Disciplinary Code.
Homework	NO	Homework is assigned to practice the content of courses. Students should be conscientious and work independently. If the use of AI is not explicitly regulated and a student wishes to use AI in his/her homework, he/she must discuss the AI use with the teacher.
Programming	Partially	When using AI tools, follow your teacher's instructions. In programming, AI tools may be used for self study, consultations and self testing (as discussed above). Tools such as Github Copilot or Code Llama can save programmers a lot of time and often can even design the entire solution correctly. However, the student is the author of the code and should, therefore, know exactly when the generated code actually does and be able to modify the code if necessary. The student must be able to write the same code even without the help of AI tools - such tools may not be available during exams (or indeed later in real life).

4.3 To learn more about the basics of AI, students can enrol a university-wide course (course code: CTUPRGEAI) prepared by MinnaLearn and the University of Helsinki. The name of the course is Elements of AI – Introduction to Artificial Intelligence. Consult your faculty/institute for possible recognition of the course in the curriculum.

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Art. 5 Rules for the use of artificial intelligence by CTU teaches

5.1 The advent of new AI tools is forcing us to rethink the future role of the engineer. We must adapt our teaching and testing of acquired knowledge in a way that takes into account the fact that engineers should and will use the assistance of existing and future tools in their work.

5.2 CTU has the great advantage of a wide variety of diverse study programmes as well as teaching methods based on the thoughts and ideas of individual academics. This diversity needs to be maintained and encouraged because the tasks facing future engineers will be equally diverse, as will be the attitudes and approaches of the people they work with.

5.3 Where relevant to the subject, teachers should set clear rules for the use of AI in their classes in advance and publish these rules on the course pages, including the rationale behind the rules so that students knows why the rules are set in this particular way.

5.4 Using AI in teaching

Activity	Acceptable	Note
Confrontation with AI during a lecture/exercise	Yes	When explaining a problem, the use of AI can bring a new perspective and help students better understand the problem.
Integration of AI in teaching	Yes	Introducing AI tools to students (including good and bad uses) in combination with traditional teaching methods.
Course preparation	Yes	AI has been trained using various data, including a large amount of pedagogical literature; AI can help you improve the clarity of your text, generate variants of existing assignments, etc.

5.5 There is no need to change established procedures in face-to-face types of testing. Problems may arise in online testing and homework assignments. The recommended approach to interim and final online assessment of students' knowledge:

Type test/exam	Acceptable	Note
Online multiple choice test	NO	AI solves 90% of multiple-choice tests correctly.
Literature search without clear assignment	NO	AI can generate general literature search results. Proving a student's violation of this rule is virtually impossible. If no other form of assignment is possible, additional rules should be set to check that the student actually carried out the work, e.g. the assignment should not end with the text itself but should also include a discussion/justification or a video.
"Essay" assignments	NO	See above
Online oral examination	Yes	For smaller subjects, this is one of the most appropriate methods of demonstrating students' knowledge.
Exams using drawings, graphs	Yes	AI is not (yet) able to generate sufficiently concrete and accurate answers to questions regarding images.
Detection of solutions / answers generated using AI	NO	AI tools cannot be used to detect solutions created by students with the help of AI. Both false positive and false negative cases can easily occur.

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5.6 Recommended approach to SP or ZP assignment:

Recommendation	Note
ZP/SP assignment resulting in a specific output	AI is useless in creative assignments where students must create a drawing, a diagram, a mock-up, etc. If such as assignment is impossible, it is advisable to require students to defend their SP/ZP or provide a short video in which the student describes his/her work on a specific part of the assignment selected by the supervisor.
ZP evaluation with only selected questions that do not address the student's understanding	Evaluation by the opponent or supervisor should only include questions addressing specific inconsistencies in the thesis. Leave questions that can demonstrate understanding of the topic and, therefore, prove that the student prepared the thesis on his/her own, to the thesis defence.
More time for ZP defence	The student's authorship of the ZP is best assessed by having a long face-to-face discussion about the thesis.
SP assignment including a drawing, graph, etc.	See above in "Exams using drawings, graphs".

Art. 6 Literature

6.1 https://www.elsevier.com/about/policies/publishing-ethics

6.2 http://knihovna.cvut.cz/seminare-a-vyuka/jak-psat/priklady-citaci#jak-citovat-ai-chatgpt

6.3 Achten H. Chat GPT and PhD research. 2023. https://www.linkedin.com/pulse/chatgpt-phd-research-henri-achten/