NMSA409, NMFP403 Stochastic processes 2
Comments on the use of AI

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The availability of artificial intelligence (AI) tools makes it necessary to establish clear rules for their use in your studies, so that you do not have to wonder which uses of AI are appropriate or even recommended, and which are not.

The fundamental principle is that AI may serve as a tool supporting your learning, but it should not replace it. Using AI to gain a deeper understanding of the material or to practice concepts studied in the course is beneficial and entirely appropriate. However, using AI to avoid work or complete homework assignments is not helpful. Your goal in this course and in all your studies is learning, and that does not happen without effort, cognitive friction, and productive struggle. *Letting AI do your work is like going to the gym and having a robot lift your weights. There is no gain. Letting AI help you do your work is like going to the gym and having a personal trainer who shows you correct techniques, helps you plan your workouts, and checks your progress.*

The authors of the electronic materials used in this course (lecture notes, the collection of solved exercises, and exercise sheets) explicitly consent to these documents being uploaded to various AI models. From the perspective of copyright protection, the most appropriate tool is Microsoft *Copilot*, to which you have access through Charles University.

When working with AI, a healthy degree of skepticism and caution is always necessary! The outputs generated by AI models must always be verified and critically evaluated for correctness.

Examples of acceptable uses of AI include (but are not limited to):

- searching for sources and additional study materials,
- explaining concepts and their motivation,
- illustrating or visualizing concepts and ideas,
- clarifying difficult parts of proofs,

- generating worked examples,
- generating unsolved exercises for independent practice,
- checking your own solutions to problems,
- checking your solution to homework assignments,
- generating customized questions based on the expected learning outcomes.

Examples of inappropriate uses of AI include (but are not limited to):

- completing homework assignments (the goal is to develop your mathematical skills, not your ability to write prompts),
- explaining entire proofs (due to the risk of incorrect reasoning),
- replacing the primary course materials (lecture notes, collection of solved exercises) with simple prompts (due to the risk of excessive simplification, omission of assumptions, and similar issues),
- performing more complex manipulations or calculations while solving problems (working through the problems yourself provides important practice and develops essential skills; when this is not feasible, more appropriate tools are available through the faculty, such as *Wolfram Mathematica*).