

seminars, types of teaching materials, teaching format; impartial and objective assessment of students' learning outcomes, ensuring a friendly environment in the university. Adherence to the principles of academic freedom is realized by students through the acquisition of knowledge, the formation of competencies by their vision and needs; free choice of academic disciplines and forms of education, research guidelines in the process of writing a term paper or qualification work, independent completion of educational tasks, etc.

### References

1. Website of the Ivan Franko National University of Lviv.  
URL: <https://www.lnu.edu.ua/>

**Key words:** academic freedom, integrity, university, academic staff, students.

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## THE POTENTIAL IMPACT OF GENERATIVE AI ON OPEN SCIENCE AND REPRODUCIBILITY

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Recent advances in Large Language Models (LLMs) have captured the public attention and raised interest in the potential for such AI technologies to transform workflows across a range of areas, including scientific work. Rich experimentation is already underway to examine their potential in reshaping scientific tasks including information retrieval, data analysis, data synthesis, quality assurance and more. This comes, however, at a time when many disciplines are addressing what has been termed a “reproducibility crisis”, with systematic replication, prevalence of questionable research practices

and lack of transparency casting doubt on the robustness of results. Touching on issues of reproducibility, bias and transparency in LLMs, and engaging with recent exploratory work on use-cases for LLMs in science, this talk will examine the potential for LLMs to both help and hinder improvement on Open Science, reproducibility and trust in scholarly knowledge.