

Introduction to Philosophy of Physics

Essay topics

Due: 30 April 2026

Modalities

As stated in the syllabus, the grade for this course is based on an essay of approximately 3,000 to 3,500 words. The following rules apply:

- A word count must be included.
- The use of Gen AI tools for drafting the text or for grammatical and stylistic corrections is prohibited. Any other use of Gen AI tools must be mentioned, specifying which tools were used for which activities and for which parts of the paper.
- The paper must be uploaded to icorsi by **30 April 2026**. Any request for an extension must be received by me before that deadline.

Evaluation

I expect to receive essays which are well-structured, clearly argued, and show signs of independent thinking. As a general rule, essays carefully working out a smaller point tend to receive higher grades than essays superficially covering vast philosophical territories. This is a finger exercise, not a commission of a symphony.

Topic

You are free to choose a topic in philosophy of physics within what we covered in the course. Below are some possible topics from which you may choose one. If you want to write on a different topic, you must obtain prior permission from me by sending me a brief description by 15 April 2026. For all topics, make sure to read the relevant readings given in the course on that topic. Please do not hesitate to contact me if you want suggestions for further readings or have any questions.

1. Consider the debate between substantivalism and relationalism about space, and the role of static, kinematic, and dynamic shifts in it. Explain how the third kind of shifts seems to rule out relationalism and discuss possible relationalist responses to the problem. Finally, take a stance in the debate and defend it.
2. Explain the relativistic argument against the fundamentality of the present and how it threatens present-centric models of time. How can and should a presentist reply to the threat? Why? Take a position in the debate and defend it.
3. In general relativity, the debate among different metaphysical positions concerning time (presentism, growing block, eternalism, etc.) gets complicated by two facts. On the one hand, not all general-relativistic spacetimes permit a foliation into time slices. On the other hand, in some spacetimes, there is a naturally privileged choice of foliation into time slices available. What do you think is the impact of these two facts on the metaphysical debate? Explain your answer and take a stance.
4. What is the quantum measurement problem? What is its connection to the question of determinism?
5. Discuss Bell's derivation of the inequality featured in his theorem and what it tells us about quantum physics, and indeed about the world we seem to inhabit. Where do you think does this lead us, how should we accommodate this result in our worldview?