

Introduction to Philosophy of Physics

John Dougherty

WiSe 2026/27

Meeting:	Tuesdays, 14:00–16:00 (c.t.) Ludwigstr. 31, Room 028
Office Hours:	Thursdays, 15:00–17:00 Ludwigstr. 31, Room 131
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Description

This course is an introduction to philosophical issues arising in physics. These issues include questions about how motion is possible, how mathematics relates to the physical world, whether space and time exist, whether there are objective facts about the geometry of space, and the nature of the laws of physics.

Assessment

The evaluation for this course will be by means of a term paper submitted at the end of the semester. If you would like to submit a term paper, you must register through LSF during the registration period (11.01.–22.01.2027) and submit it to me by email by the term paper deadline (22.03.2027). Please note that extensions of this deadline are not up to me; if you need an extension, please contact Fabian Widerna (f.Widerna@lmu.de) at the Prüfungsamt für Geistes- und Sozialwissenschaften (PAGS).

Your paper should be on a philosophical topic related to the problems addressed in this course. Near the end of the semester I will distribute a list of suggested questions and grading criteria. You may write your paper on topic not on that list; if you do, then I recommend speaking to me before writing the paper, so that I can advise on the topic and scope of your planned alternative. The term paper should be about 5000 words for 6 ECTS. It should be written in 12pt font, with 1.5 spacing, 3cm margins on the left and right, and a standard academic typeface (e.g., Computer Modern, Times New Roman, Palatino, Calibri, etc.)

Resources

Questions about the administration of philosophy teaching at LMU should be directed to Thomas Wyrwich (thomas.wyrwich@lrz.uni-muenchen.de). The Erasmus coordinator for philosophy at LMU is Peter Adamson (office.peter.adamson@lrz.uni-muenchen.de). The list of women's representatives (Frauenbeauftragte) for the Philosophy Faculty can be found on the Faculty's webpage (www.philosophie.uni-muenchen.de/fakultaet/frauenbeauftragte/index.html); the representatives for the MCMP are Vanessa Carr and Sophie Kikkert. Issues regarding the economic, social, and cultural aspects of student life—including studying with a child or studying with a disability—are the responsibility of the Munich Student Union (<https://www.studentenwerk-muenchen.de>).

Schedule and readings

All texts are on LSF.

13.10. Introduction

20.10. Plato, *Timaeus* 27c–39e, 48a–57e

27.10. Aristotle, *Physics* IV.1–9

03.11. Cushing, *Philosophical Concepts in Physics*, Ch. 4

10.11. Kuhn, *The Copernican Revolution*, pp. 134–155

17.11. Galileo, *Dialogue Concerning the Two Chief World Systems*, selections

24.11. [RESCHEDULE] Descartes, *Principles of Philosophy*, Part II

01.12. Leibniz, *Specimen Dynamicum*

08.12. Newton, *Principia*, selections

15.12. Leibniz–Clarke correspondence, selections

22.12. [CANCELLED]

12.01. Du Châtelet, *Foundations of Physics*, selections

19.01. Kant, *Prolegomena*, selections

26.01. Sklar, *Philosophy and the Foundations of Dynamics*, Ch. 16

02.02. Hesse, *Forces and Fields*, selections