

**METAPHYSICS:
SPACE AND TIME**

PHIL 4370*01x6310*01
Winter 2015
Mon. 11:30 – 2:20
ALEX 117

Instructor: Andrew Wayne
Office: MACK 331
Office hours: Mon. 3:00 – 4:30
and by appointment
Tel: 519-824-4120 x56787
Email: awayne@uoguelph.ca

Course Outline

This course examines the development of our metaphysical and scientific understanding of space, time and motion from the ancient Greeks to the present day. We begin with Plato and Euclid. We then focus on the classical debate about the reality of space in the work of Newton, Leibniz, Berkeley and Mach. Finally, we study the impact of the conventionalist and relativistic theories of Poincaré and Einstein. Space and time are of interest not only as one of the central topics in metaphysics, but also as an exemplar of how research in metaphysics is done.

Texts and Course Materials

- Nick Huggett, *Space from Zeno to Einstein* (MIT Press, 1999)
- Online materials at <http://courselink.uoguelph.ca>. You are responsible for accessing CourseLink regularly. Some course materials and grading comments may only be available on CourseLink.

Course Requirements

- 10% Best 10 weekly reading responses
- 20% Midterm test #1
- 20% Midterm test #2
- 15% Meet with instructor and presentation on your term paper
- 35% Term paper

Reading responses are due at 10:30 am before each Monday class, submitted via CourseLink. They should be around 500 words in length, and should synthesize and present one to three main points of the reading for the week. Each reading response should end with a good question about the reading. Each satisfactory reading response adds 1 percentage point to your final grade, up to a maximum of 10 points (late responses not accepted). Additional in-class exercises may also be a part of this component of your grade.

Additional support

Students with special needs or requiring additional support are encouraged to speak with me as early in the term as possible to ensure that appropriate arrangements are made.

College of Arts Policy Statements

Please see: https://www.uoguelph.ca/philosophy/resources/standard_statements

Tentative schedule

<u>Week</u>	<u>Topic</u>	<u>Required reading</u>
1. Ancient views of space		
Jan. 5	Plato	Huggett, Ch. 1
Jan. 12	Euclid	Huggett, Ch. 2
2. Substantivalism vs. relationalism		
Jan. 19	Newton	Huggett, Ch. 7
Jan. 26	Leibniz and Clarke on substantivalism	Huggett, Ch. 8
Feb. 2	Leibniz' relationalism	Sklar, pp. 167-181 <i>Midterm test #1</i>
Feb. 9	Berkeley's and Mach's relationalism	Huggett, Ch. 9
3. The epistemology of geometry		
Feb. 23	Kant	Huggett, Ch. 12
Mar. 2	Poincaré	Huggett, Ch. 13
Mar. 9	Reichenbach	Sklar, pp. 94-101 <i>Midterm test #2</i>
4. The metaphysics of spacetime		
Mar. 16	From space and time to spacetime	Huggett, Ch. 10 <i>Term paper presentations</i>
Mar. 23	Einstein's metaphysics	Huggett, Ch. 14 <i>Term paper presentations</i>
Mar. 30	Physics and metaphysics	Sklar, pp. 415-417 <i>Term paper presentations</i>
		<i>Term paper due Apr. 10</i>