

Phil 125: Philosophy of Science
Fall, 2020

Tuesday and Thursday, 1:30–3:05pm

Contact Information

Professor: Abe Stone (abestone@ucsc.edu)

Push notification: Notify Abe (<http://notifyabe1.appspot.com>)

Website: <https://people.ucsc.edu/~abestone/courses>

Office hours (via Zoom): T.B.D.

Zoom class meeting: <https://ucsc.zoom.us/j/98834069201?pwd=RUNuNUE2b0tGe1YrMDJtUFpRT1>

Zoom office hours: Mon. noon–1:00pm; Wed. 3:00–4:00pm


Course Description

We will read some of the classic texts which created and set the stage for later developments within the subdiscipline now known as philosophy of science. The course will be divided into two halves, corresponding to two fundamentally different views about what makes science distinctively rational (due to Rudolf Carnap and Karl Popper, respectively). In each case we will also read important later works which were taken to undermine the view in question.

Course Requirements

A midterm assignment (your choice of a take-home exam or a 4–6 page paper) due Thursday, November 12, and a final assignment (your choice of a take-home exam or a 4–6 page paper), due Wednesday, December 16. Each of the two assignments is worth 50% of the course grade.

All paper assignments will be available on-line, and there are be links to them from this syllabus as well as from my main course page. I will discuss the assignments in class when the due date draws near. You can find answers to

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some commonly asked questions about my assignments and grading in my FAQ(<https://people.ucsc.edu/~abestone/courses/faq.html>).

Papers are to be handed in, as attachments, via the “Assignments” tool on Canvas. Please submit in PDF or in a format easily convertible to PDF (e.g., MSWord). The system will accept late submissions, but late papers may not receive full credit. The system is *not* set up to allow resubmissions: once you press the “submit” button, it will not let you change your response. If, however, you mistakenly submit something and want to change it, please contact me and I can make an exception.

I understand that conditions may be difficult and will be flexible about due dates, etc., if necessary. But please try to hand in work on time if you possibly can.

There be live Zoom lectures at the scheduled course time. Live attendance at these is not required (in general, I never require attendance at my lectures), but I highly advise you to attend if possible. It will be difficult for me to teach if there is no live audience at all. However, all lectures will also be recorded and made available for viewing later (on YouTube). Links to the recorded lectures will appear on this syllabus as they are put up.

Texts

Rudolf Carnap, *The Logical Structure of the World* (Open Court, 2003) (ISBN: 978-0812695236).

(This book is generally known as “the *Aufbau*,” following its original German title, *Der logische Aufbau der Welt*.)

Nelson Goodman, *Fact, Fiction, and Forecast* (Harvard, 1983) (ISBN: 978-0674290716).

Thomas Kuhn, *The Structure of Scientific Revolutions* (Univ. of Chicago Press, 2012) (ISBN: 978-0226458120).

Karl Popper, *The Logic of Scientific Discovery* (Routledge, 2002) (ISBN: 978-0415278447).

These texts can be ordered through the Bay Tree Bookstore. Readings not from these texts will be available on Canvas

Readings

Thursday, October 1: (no reading, first class). (Lecture on YouTube.)

Part I: Carnap/Goodman/Quine

Tuesday, October 6: Carnap, *Aufbau*, Preface to 1st Edition (pp. xv–xviii); §§1–5 (pp. 5–10); §§17–25 (pp. 31–43). I’ve made this first reading available here. (Lecture on YouTube.)

Thursday, October 8: Carnap, *Aufbau*, §§26–41 (pp. 47–70); §§46–60 (pp. 78–97). (Lecture on YouTube.)

Tuesday, October 13: Carnap, *Aufbau*, §67 (pp. 107–9); §§95–6 (pp. 152–4); §§98–103 (pp. 156–63); §§125–8 (pp. 194–9); §157 (p. 246); §§160–61 (pp. 254–7); §§165–9 (pp. 263–72). (Lecture on YouTube.)

Thursday, October 15: Carnap, *Aufbau*, §§175–83 (pp. 281–98). (Lecture on YouTube.)

Tuesday, October 20: Carnap, *The Unity of Science*, §§1–3 and 6; Neurath, “Protocol Sentences”; Carnap, “On Protocol Sentences.” (Lecture on YouTube.)

Thursday, October 22: Carnap, “The Methodological Character of Theoretical Concepts,” §§1–6, beginning of §7 (through the paragraph that ends on top of p. 54), and §§8–10; Putnam, “What Theories Are Not.” (Lecture on YouTube.)

Tuesday, October 27: Goodman, *Fact, Fiction, and Forecast*, ch. 2 (pp. 31–58). (Lecture on YouTube.)

¹The symbol § means “section.” §§ means “sections.”

Thursday, October 29: Goodman, *Fact, Fiction, and Forecast*, ch. 3 and beginning of ch. 4 (pp. 59–99). (Lecture on YouTube.)

Tuesday, November 3: Quine, “Epistemology Naturalized.” (Lecture on YouTube.)

Part II: Popper/Kuhn

Thursday, November 5: Popper, *LSD*, ch. 1 and 2 (pp. 3–34). (Lecture on YouTube.)

Tuesday, November 10: Popper, *LSD* ch. 3 (pp. 37–56). (Lecture on YouTube.)

Thursday, November 12: Popper, *LSD*, ch. 4 (pp. 57–73) (and **Midterm assignment — exam or paper — due**). (Lecture on YouTube.)

Tuesday, November 17: Popper, *LSD*, ch. 5 (pp. 74–94). (Lecture on YouTube.)

Thursday, November 19: Popper, *LSD*, ch. 10 beginning and §79 (pp. 248–52); §82 (pp. 264–7); §84 through end (including Addendum), pp. 273–82. (Lecture on YouTube.)

Tuesday, November 24: Neurath, “Pseudorationalism of Falsification”; Putnam “The ‘Corroboration’ of Theories”; Lakatos, “Popper on Demarcation and Induction,” through end of part I (pp. 241–52). (Lecture on YouTube.)

Thursday, November 26: **No class (Thanksgiving)**

Tuesday, December 1: Kuhn, *SSR*, ch. 1–5, pp. 1–51. (Lecture on YouTube.)

Thursday, December 3: Kuhn, *SSR*, ch. 6–8, pp. 52–91. (Lecture on YouTube.)

Tuesday, December 8: Kuhn, *SSR*, ch. 9–10, pp. 92–135. (Lecture on YouTube.)

Thursday, December 10: Kuhn, *SSR*, ch. 11–13, pp. 136–73. (Lecture on YouTube.)

Wednesday, December 16: **Final assignment (exam or paper) due.**