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• **General Course Information**

Philosophy of Science---Spring 2014---Aron Edidin

ACE 102, Mondays and Thursdays, 3:30 - 4:50

My office is ACE 234.

Office hours: 2:30-3:30 Tuesdays and Fridays, or by appointment

edidin@ncf.edu

x4248 (or call me at home, 11AM - 11PM only, please)

Texts:

Timothy McGrew, Marc Alspecter-Kelly, and Fritz Allhoff, eds., *Philosophy of Science: An Historical Anthology* (PS)

Thomas Kuhn, *The Structure of Scientific Revolutions* (SSR)

Readings from outside of these books are linked-to in the syllabus below. Links to articles should work anywhere just by clicking. Links to e-journals will work just by clicking on campus; from off campus you'll need first to go through the library's "connect from home" procedure (following links on the library web and portal pages) in another tab or window.

After the day-by-day syllabus below are sections on written assignments for the course, the course attendance policy, the New College disability accommodation policy, and privacy accommodations.

Here's a link to the New York Times philosophy series "[The Stone](#)"

Here's a link to the [Florida Student Philosophy Blog](#).

Here's a link to [the New College booklet on plagiarism](#), which explains the concept and has a variety of advice about ways of citing sources.

Here are three links to philosophical glossaries, one a real glossary and the other two full of philosophical inside jokes:

[A Philosophical Glossary for Beginners](#) (A real glossary. Good to look at for paper-writing; warns against several common mistakes of usage)

[The Philosophical Lexicon](#) (Puns on philosophers' names)

[A Non-Philosopher's Guide to Philosophical Terms](#) (Jokes that contrast non-philosophers' and philosophers' use of terms)

-  Hidden from students: Course Readings Folder

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General Introduction

Monday, February 3 -- *General Introduction*

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The Logic-Of-Science Approach

Thursday, Feb. 6 -- *A Classic Statement of the Approach*

Rudolf Carnap, "Theory and Observation" (5.1 in PS)

Monday, Feb. 10 -- *Complications concerning confirmation*

Pierre Duhem, "Against Crucial Experiments" (4.13 in PS)

Karl Popper, "Science: Conjectures and Refutations" (7.1 in PS)

Thursday, Feb. 13 -- *Complications concerning explanation*

Wesley Salmon, "Counterexamples to the D-N and I-S Models of Explanation" (8.1 in PS)

Andrea Woody, ["Telltale Signs: What Common Explanatory Strategies in Chemistry Reveal About Explanation Itself"](#) (link to e-journal)

Monday, Feb. 17 -- *Explanation in Social Sciences*

Merilee Salmon, "[Explanation in the Social Sciences](#)" (link to article)

Thursday, Feb. 20 -- *Theory and Observation*

Hilary Putnam, "What Theories Are Not" (6.5 in PS)

N.R. Hanson, "On Observation" (6.6 in PS)

Monday, Feb. 24 -- *More Theory and Observation*

Grover Maxwell, "The Ontological Status of Theoretical Entities" (6.7 in PS)

Bas van Fraassen, "Constructive Empiricism" (9.3 in PS)

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A Whole 'Nother Approach

Thursday, Feb. 27

Thomas Kuhn, SSR, Chapters II-V

Monday, March 3

Thomas Kuhn, SSR, Chapters VI-IX

Thursday, March 6

Thomas Kuhn, SSR, Chapters X, XII, XIII

Monday, March 10 -- *Social Epistemology*

Miriam Solomon, "[Social Empiricism](#)" (link to e-journal)

Realism Revisited

Thursday, March 13 -- *Realism and Experiment*

Ian Hacking, "[Experimentation and Scientific Realism](#)" (link to e-journal)

Monday, March 17 -- *Realism, or What?*

Arthur Fine, "The Natural Ontological Attitude" (9.4 in PS)

Alison Wylie, "[Arguments for Scientific Realism: The Ascending Spiral](#)" (link to e-journal)

Thursday, March 20 -- *Metaphor in Science*

Mary Hesse, "[The Explanatory Function of Metaphor](#)" (link to article)

March 24, 27 -- Spring Break

The Unity (or Disunity) of Science

Monday, March 31 -- *Unity: A Classic Formulation*

Paul Oppenheim and Hilary Putnam, "[Unity of Science as a Working Hypothesis](#)" (link to article)

Thursday, April 3 -- *Against Unity*

Jerry Fodor, "[Special Sciences \(Or, The Disunity of Science as a Working Hypothesis\)](#)", pp. 97-107, 112-114 (link to e-journal)

Monday, April 7 -- *Another Kind of Unity*

Angela Potochnik, "[A Neurathian Conception of the Unity of Science](#)" (link to e-journal)

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Feminist Philosophy of Science

Thursday, April 10 -- *Case Studies of Male Bias in Science*

Helen Longino and Ruth Doell, "[Body, Bias, and Behavior: A Comparative Analysis of Reasoning in Two Areas of Biological Science](#)" (link to e-journal)

Monday, April 14 -- *Feminism as a Component of Scientific (and Philosophical) Method*

Elisabeth Lloyd, "[Feminism as Method: What Scientists Get That Philosophers Don't](#)"(link to e-journal)

Thursday, April 17 -- *What Makes a Good Theory?*

Helen Longino, "[Gender, Politics, and the Theoretical Virtues](#)" (link to e-journal)

Monday, April 21 -- *Neutrality, Objectivity, and Politics*

Sandra Harding, "['Strong Objectivity: A Response to the New Objectivity Question'](#)"(link to e-journal)

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Topics and Readings to be Chosen by Class

Thursday, April 24 --

Monday, April 29 -- Baccalaureate exam day. No class meeting. Attend baccalaureate exams!

Thursday, May 1 --

PART 1 OF FINAL PROJECTS DUE! Be sure to include a completed [Writer Review Form](#)

Monday, May 5 --

TERM PAPER DRAFTS DUE! Be sure to include a completed [Writer Review Form](#)

Also: bring copies of your draft or of Part 1 of your project for each member of your group to read for Friday's discussion!

Thursday, May 8 -- *Discussion of term paper drafts and pt. 1 of final projects. Bring two copies of completed [peer review form](#)*

PART 2 OF FINAL PROJECTS DUE!

Monday, May 12 --

Monday, May 19 --

PART 3 OF FINAL PROJECTS DUE! Be sure to include completed [Writer Review Form for Part 3](#)

TERM PAPERS DUE! Be sure to include [Writer Review Form for Revision](#)

Written Work for this Course

The following written work is required for this course:

- (1) Three discussion questions, typewritten and submitted each day on that day's reading,
 - (2) Five two- to four-page response/reaction papers,
 - (3) Two perfect paragraphs,
- and
- (4) A three-part final project (for less experienced philosophy students) or term paper (for more experienced philosophy students).

There will also be occasional free-writing at the end of class sessions.

Discussion Questions: Three short questions (one sentence each) on each day's reading, turned in that day (typewritten).

Five Response/Reaction Papers: Each response/reaction paper must be submitted on the day we discuss the relevant selection in class, and only one paper may be submitted for each class meeting. At least two must be submitted by March 6, four by the end of Mod 1, and all five by April 21. The assignment of response/reaction papers is borrowed from Professor Catherine Elliott; the following description is taken from the syllabus for her Seminar on Rationality:

"A response/reaction paper is not a description or summary, and in particular, it is not a "book report". As the name suggests, each paper should represent your response/reaction to some aspect of the reading which interests/intrigues/concerns/engages you. But: analyze; make a point; express an argument or dispute one. Consider these response/reaction papers as opportunities for intellectual creativity and thoughtful experimentation, rather than as exercises to be produced according to some formula for "right" thought or analysis. Think about what you are reading, attempt to explore new implications and connections to previously held beliefs. If you find yourself "stuck", one technique is to grapple with parts of the readings which you find disagreeable or irritating. However, do not simply identify these parts -- if you challenge an idea, propose a counter and defend it. Ideally, each paper should have only one primary focus. The maximum page limit is four -- thus, you should work hardest to provide depth for your response/reaction -- as opposed to free-association of a myriad of things."

Two Perfect Paragraphs: These should be revisions of paragraphs from earlier response papers. At least one must be submitted by the end of Mod 1, and both by April 21. The assignment of perfect paragraphs is borrowed from Professor Robert Zamsky; the following description is taken from his courses:

"Paragraphing is a fundamental component of successful writing, and learning how to consistently write good paragraphs, even when dealing with material that is complex or simply voluminous, also helps to develop focus and organization. You all know the basic fundamentals of a paragraph: a topic sentence, support and evidence, and a conclusion. The trick is to consistently work with this structure, while, at the same time, not turning into a robot.

I will evaluate your paragraphs based upon the following criteria:

Content: does the paragraph make a clear, relevant, and convincing point about the reading?

Structure: do the topic sentence, support, and conclusion cohere? Could any of them be usefully expanded, or, alternately, be trimmed down?

Clarity: Style and mechanics count. You should shoot for content rich sentences that do not include extraneous words. Be both precise and economical with your language.

The paragraph must not exceed 275 words."

Final Project (for less experienced philosophy students): This project will involve writing and then further reflecting (in writing) on what you have written. The project consists of three short (ca. 6 page) papers:

(1) A paper on a topic of your choice. Explain and defend a philosophical conclusion of your own, on an issue discussed in or suggested by course readings or class discussions. The purpose of the paper is to develop your thinking about the issue, though you should also show that you are aware of relevant discussions in the readings. You may, if you so choose, proceed by describing and criticizing, extending, or developing the approach of an author we've read. But you are not required to do so. The focus should be on your own reasoned evaluation of the issue. This part is due at the start of class on May 1, and should be accompanied by a completed [Writer Review Form](#).

(2) A paper on the same topic, but taking a position contrary to the one you take in Part 1. You may address Part I directly, or just defend a contrary conclusion in an independent paper. Stick with arguments and positions that you think are plausible, but don't be afraid to adopt for the sake of argument views you don't actually hold. This part is due at the start of class on May 8.

(3) A final (for the time being) discussion of the issue you've chosen, in light of (1) and (2). This paper should, like (1), reflect your own actual view of the issue at the time you're writing. It may involve defending the view you developed in (1) against the criticism contained in (2). It may involve further explanation or development of your initial view. Or it may involve modifying or even abandoning your initial view. This part is due on May 19 (Monday of exam week), and should be accompanied by a completed [Writer Review Form for Part 3](#).

Term Paper (for more experienced philosophy students): A long (ca. 15-20 page) paper on a topic of your choice. Explain and defend a philosophical conclusion of your own, on an issue discussed in or suggested by course readings or class discussions. The purpose of the paper is to develop your thinking about the issue, though you should also show that you are aware of relevant discussions in the readings. Although you will almost certainly be

discussing other authors in the course of the paper, the focus should be on your own reasoned evaluation of the issue. A complete draft of the paper is due on May 5 (accompanied by a completed [Writer Review Form](#)), and the final version is due on Monday of exam week (May 19), accompanied by a completed [Writer Review Form for Revisions](#).

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Attendance Policy

To complete this course satisfactorily, you may miss no more than 3 class meetings. Very rarely, additional absences may be permitted in cases of genuine emergency.

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NCF Statement on Disability Accommodation

Students with disabilities are responsible for registering with the Students with Disabilities Services office (SDS) in order to receive special accommodations and services. It is the responsibility of the student to notify the instructor as soon as possible if a reasonable accommodation for a disability is needed for this course. An official memo of accommodation from the NCF Disability Services Office should be presented to the instructor. The SDS office is located within the Counseling and Wellness Center (www.ncf.edu/disability-services-ncf). Reasonable notice should be given for accommodations to be arranged with Disability Services (typically 5 business days). Contact information: John O'Hara at [941-487-4254](tel:941-487-4254).

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Privacy accommodation

For reasons of convenience, and to encourage communication among members of the class, I won't generally hide recipients' email addresses when I send emails to the whole class or multiple members of the class. If you want your email address to be hidden from your classmates, let me know and I'll use bcc for your address in messages that are also sent to other recipients.

(Do note that unless you've made special arrangements, your email address is easily accessible through automatic searches in the NCF gmail system.)