

PHI 499: Capstone: Philosophy of Science

University of Wisconsin Stevens Point

Fall Semester 2022

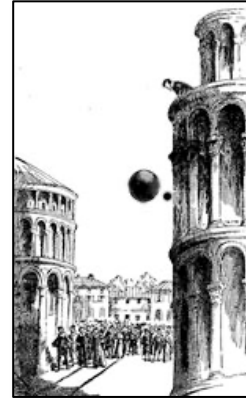
T/R 11:00 – 12:15; CCC 233

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Office Hours: M/W 10-12, and by appointment



Course Description

This is a capstone course which will be fulfilled through PHIL 306: Philosophy of Science.

Essential Questions

- What makes a question “philosophical”? How do philosophers make progress on particular issues?
- How does science contribute to our understanding of our world?
- How accurate is the scientific “depiction” of the world?
- Is there a sharp contrast between science and pseudoscience?

Enduring Understandings

You will come to understand that:

- The folk conception of science is often misleading or confused.
- The appearance of the world may not accurately reflect reality.

Knowledge, Skills, and Dispositions

You should be able to:

- Identify and evaluate arguments.
- Apply critically thinking skills to other professional and personal pursuits.
- Understand a variety of philosophical concepts, questions, and positions.
- Defend your own philosophical positions against criticisms.
- Read and comprehend challenging philosophical works.
- Appreciate and respect differing points of views.

Required Texts:

Godfrey-Smith, Peter. *Theory and Reality: An Introduction to the Philosophy of Science*. 2nd Edition. University of Chicago Press (2003).

Cover, J. A. and Martin Curd. *Philosophy of Science: The Central Issues*. W. W. Norton and Co. (1998).

Additional readings will be posted on Canvas.

Graded assignments will include:

1. Ten Quizzes/Assignments (20% total)
2. Term Paper, including rough draft (80%)

Quizzes/Assignments: Most quizzes will be “pop” and can occur anytime during class. I promise to give at least (12) quizzes or assignments and only the best (10) will count. As a result of this policy, quizzes cannot be made-up for any reason (including sickness, etc.). Please do not ask if there will be a quiz on any particular day.

Term Paper: You will develop a paper topic, in consultation with the instructor, around material covered within the course material, or more broadly within philosophy of science. This paper will require research in addition to the course readings and must be between 15-20 pages. Also, there will be a presentation component of this grade, where you will present your work either in class, or in an agreed upon public venue (for example, the CoLS Symposium).

Final grades will be determined on the following scale:

100-93	A	<87-83	B	<77-73	C	<67-63	D
<93-90	A-	<83-80	B-	<73-70	C-	<63-60	D-
<90-87	B+	<80-77	C+	<70-67	D+	<60	F

Late Policy: Quizzes cannot be made-up. Short assignments will be docked 10% off per day late.

Academic Honesty: If you commit any acts of academic dishonesty (such as plagiarism on written work or cheating on an exam) you will earn a zero for that work (and possibly other disciplinary actions). Please refer to the Student Academic Standards and Disciplinary Procedures for more information

(<http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf>)

Attendance: Attendance is not mandatory and will not be recorded (with the exception of the first few classes, which is mandatory). With that said, if you do not attend class on a regular basis, you will do poorly. Furthermore, quizzes and assignments will be administered on a regular basis and schedule changes will be announced in class.

Americans with Disabilities Act (ADA) Statement: The ADA is a federal law requiring educational institutions to provide reasonable accommodations for students with disabilities. For more information about UWSP's policies, see: <http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/ADA/rightsADAPolicyInfo.pdf>.

If you require *classroom and/or exam accommodations*, please register with the **Disability and Assistive Technology Center** and then contact me at the beginning of the course. For more information, please visit the Disability Center's office, located at 604 LRC or their webpage at: <http://www.uwsp.edu/disability/Pages/default.aspx>.

Risk Management:

"In the event of a medical emergency, call 911 or use red emergency phone. Offer assistance if trained and willing to do so. Guide emergency responders to victim.

In the event of a tornado warning, proceed to the lowest level interior room without window exposure. See www.uwsp.edu/rmgt/Pages/em/procedures/other/floor-plans for floor plans showing severe weather shelters on campus. Avoid wide-span rooms and buildings.

In the event of a fire alarm, evacuate the building in a calm manner. Notify instructor or emergency command personnel of any missing individuals.

Active Shooter – Run/Escape, Hide, Fight. If trapped hide, lock doors, turn off lights, spread out and remain quiet. Follow instructions of emergency responders.

See UW-Stevens Point Emergency Management Plan at www.uwsp.edu/rmgt for details on all emergency response at UW-Stevens Point."

Schedule: Please note that there may be slight modifications to the schedule throughout the semester. If changes are made, they will be announced in class. Also, be sure to complete the readings listed for a particular day before class, since we will be discussing them on the day they are listed. Reading locations are abbreviated as follows: *Theory and Reality* (TR), *Philosophy of Science* (PS), *Sex and Death* (SD) and D2L.

Introduction	
T Sep 6	Syllabus and Introduction
R Sep 8	Introduction (TR Chap. 1)
The Logic of Science	
T Sep 13	Schlick, The Future of Philosophy (D2L)
R Sep 15	TR Chapter 2, Empiricism
T Sep 20	TR Chapter 3, Evidence and Induction Suggested: Lipoton, Induction (PS 412-425)
R Sep 22	TR Chapter 4, Popper: Conjecture and Refutation
T Sep 27	Duhem, Physical Theory and Experiment (PS 257-279)
R Sep 29	Ruse, Creation Science Is Not Science (PS 38-47) Lauden, Science at the Bar (PS 48-53) Ruse, <i>Pro Judice</i> (PS 54-61)
T Oct 4	Movie: NOVA: Judgment Day
R Oct 6	Continued and Review
T Oct 11	EXAM
Scientific Realism, Anti-Realism, and Shades In-Between	
R Oct 13	TR Chapter 5, Kuhn's Revolution
T Oct 18	Continued
R Oct 20	TR Chapter 6, Theories and Frameworks
T Oct 25	TR Chapter 7, The Challenge from the Sociology of Science
R Oct 27	Longino, Values and Objectivity (PS 170-191)
T Nov 1	TR Chapter 10, Scientific Realism
R Nov 3	Laudan, A Confutation of Convergent Realism (PS 1114-1135)
T Nov 8	Continued and Review
R Nov 10	EXAM
Science, Society, and Values	
T Nov 15	TR Chapter 8, Science is Political
R Nov 17	TBD
T Nov 22	TBD
R Nov 24	*Thanksgiving Break*
T Nov 29	TBD
R Dec 1	TBD
T Dec 6	TBD
R Dec 8	TBD
T Dec 13	TBD
R Dec 15	Review

FINAL EXAM: Monday, Dec. 19, 2:45-4:45