WESTERN UNIVERSITY
Department of Philosophy
Undergraduate Course Outline 2024-25

PHILOSOP 2300F
Philosophy of Science

INSTRUCTOR INFORMATION
Information including instructor contact details and course location can be found on the course Owl BrightSpace: https://westernu.brightspace.com/

COURSE DESCRIPTION
Modern science is widely regarded as one of our best, most reliable sources of knowledge about the world. In this course we will focus on the methods and goals of science, with the aim to better understand the nature of status of scientific knowledge. We will study different 20th century philosophers' accounts of science, including Carnap, Popper, and Kuhn. We will also study topics in contemporary philosophy of science, including explanation, evidence, sociological critiques of science, and whether science can or should describe the world as it really is.

LEARNING OUTCOMES
This is an introductory philosophy course. Outside of the goals related to understanding philosophy of science, introductory philosophy courses help students think and write in a clear, concise fashion.

Upon completion of this course, students should be able to:

A. Understand a variety of accounts of how science works. Identify and evaluate criticisms of these views
B. Identify and describe a range of issues in contemporary philosophy of science
C. Read seminal papers in the philosophy of science. Draw links between the relevant topics discussed in class
D. Write an argumentative paper defending or criticizing a position discussed in class
E. Engage in respectful classroom discussions. Debate with peers over the merits and weaknesses of views.

COURSE SCHEDULE
Note that this schedule is currently tentative, and subject to change.

Week	Topic	Readings Due
1	Introduction	GS Ch. 1, 2
2	Logical Empiricism, Induction and Confirmation, Popper	GS Ch. 3, 4 Carnap, The Elimination of Metaphysics Through Logical Analysis of Language

Week	Topic	Readings Due
		Popper, Excerpt from The Logic of Scientific Discovery
3	Kuhn, Part 1	GS Ch. 5, Kuhn Ch. 2-4
4	Kuhn, Part 2	Kuhn Ch. 9,10
5	Lakatos et al.	GS Ch. 6, Feyerabend, Excerpt from Against Method
6	Challenges to Philosophy of Science: Sociology	GS Ch. 7, Science Wars
7	Challenges to Philosophy of Science: Feminist Critiques	GS Ch 8, Douglas Sec. 6.1-6.3, Rejecting the Ideal of Value-Free Science Richardson, When Gender Criticism Becomes Standard Scientific Practice
8	Naturalism	GS Ch. 9 Kitcher, The Division of Cognitive Labor
9	Scientific Realism	GS Ch. 10, van Frassen, excerpt from The Scientific Image Hoefer, Scientific Realism without the Quantum
10	Particle Physics and Realism	GS Ch. 13, Kuhlmann, What is Real? Miller, Politics, Solid State, and the Higgs
11	Explanation	GS Ch. 11, Woodward, What is a Mechanism?
12	Bayesianism Conclusions	GS Ch. 12

TEXTS

- Peter Godfrey-Smith. Theory and Reality. Chicago: University of Chicago Press, 2021.
- Thomas S. Kuhn. The Structure of Scientific Revolutions. 4th edition. Chicago: University of Chcago Press, 2012.

Weekly additional readings will be posted on the LEARN site. These readings are **required** for the course, as discussion lead and participation marks will depend on these readings.

METHOD OF EVALUATION

Assessment	Date of Evaluation	Weighting
Participation		15%

Reading Assignments		15%
Essay Draft	Week 7	10%
Peer Review	Week 9	25%
Final Essay	December 6, 2024	35%
Total		**100%**

Participation
An expectation of this course is regular, in-person attendance and active participation during class. This grade will be determined by a combination of attendance and constructive contribution to the lessons.

Reading Assignments
As part of the idea that the classroom is a place to engage in active learning, it is important to come to class prepared by having completed the readings. To ensure this, there will be a short reading assignment each week (except for weeks in which a major assignment is due). The assignment will be due before the first class of the week; get into the habit of getting the readings done in advance.

Essay
The final paper will be a 5-8 page argumentative paper (double-spaced; 1500-2400 words) engaging with a topic covered in the course. A handout with potential paper topics and more detailed instructions will be posted on OWL later in the term. Due **11:59pm on December 6**. Your assignment must be submitted electronically to the online Dropbox on LEARN. Late papers will be penalized at 5% per day unless there are extenuating circumstances (e.g., a paper graded at 78% will receive a 68% if submitted on December 8). Extensions may be granted in extenuating circumstances. Please contact me **prior to the deadline** if you are seeking an extension.

As part of the preparation for the final essay, you will submit an **essay draft** at roughly the midpoint of the term. This will serve as a starting point for the **peer review** project. Anonymized drafts will be swapped in class, and your job is to provide feedback to a peer's paper on how they could improve the next draft. When you get your own paper back, you will need to write a "response to the reviewer" to go along with your final essay draft. The peer review grade is a combination of the feedback you provide to your peer and the response to reviewer project. Use those comments to write a stronger final draft.

DEPARTMENT OF PHILOSOPHY POLICIES
The Department of Philosophy policies that govern the conduct, standards, and expectations for student participation in Philosophy courses are available in the Undergraduate section of the Department of Philosophy website http://uwo.ca/philosophy/undergraduate/policies.html . It is your responsibility to understand the policies set out by the Senate and the Department of Philosophy, and thus ignorance of these policies cannot be used as grounds of appeal.

AUDIT

Students wishing to audit the course should consult with the instructor prior to or during the first week of classes.

ELECTRONIC DEVICES Students are welcome to use any electronic devices that they feel will aid them in learning, as long as they do so in a way that is not distracting to other students (e.g., turn the volume off on your laptop/tablet/cellphone). Though you may be the exception to the rule, be aware that technology use can negatively impact learning in a classroom setting. Even having someone else's screen in your line of sight can negatively impact learning. Research further shows that note taking on paper is more effective than typing for information retention. I therefore encourage you to consider refraining from the use of electronic devices in the classroom, though this will not be a rule.

STATEMENT ON THE USE OF GENERATIVE ARTIFICIAL INTELLIGENCE (AI)

In this course, students are permitted to use AI tools exclusively for information gathering and preliminary research purposes. These tools are intended to enhance the learning experience by providing access to diverse information sources. However, it is essential that students critically evaluate the obtained information, exercise independent thinking, and engage in original research to synthesize and develop their own ideas, arguments, and perspectives. The use of AI tools can serve as a starting point for exploration; however, students are expected to uphold academic integrity by appropriately attributing all sources and avoiding plagiarism. **Assignments should reflect the students' own thoughts and independent written work.** By adhering to these guidelines, students contribute to a responsible and ethical learning environment that promotes critical thinking, independent inquiry and allows them to produce original written contributions.

If plagiarism or unauthorized AI use is suspected, the instructor will ask for research notes and/or drafts of assignments after the assignment has been submitted. Students must keep all notes and first drafts until the assignment is returned to them.

ACADEMIC CONSIDERATION

Students may request academic consideration in cases of extenuating circumstances – that is, personal circumstances beyond the student's control that have a substantial but temporary impact on the student's ability to meet essential academic requirements.

1. Requests for academic consideration are made to the Academic Advising office of Faculty in which the student is registered.
2. Requests for academic consideration include the following components:
    a. Self-attestation signed by the student;
    b. Indication of the course(s) and assessment(s) relevant to the request;
    c. Supporting documentation as relevant

Requests without supporting documentation are limited to one per term per course.

Documentation for medical illness, when required, includes the completion of a Western Student Medical Certificate (SMC) or, where that is not possible, equivalent documentation, by a health care practitioner. Requests linked to examinations scheduled by the Office of the Registrar during official examination periods as well as practice laboratory and performance tests typically scheduled in the last week of term always require formal supporting documentation.

Policy on Academic Consideration – Undergraduate Students in First Entry Programs

RELIGIOUS ACCOMMODATION

Western's Policy on Accommodation for Religious Holidays can be found here: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf. In the case of mid-term tests, notification is to be "given in writing to the instructor as early as possible, but not later than **one week** prior to the writing of the test".

COURSE ASSIGNMENT

The last day of scheduled classes in any course will be the last day on which course assignments will be accepted for credit in a course. Instructors will be required to return assignments to students as promptly as possible with reasonable explanations of the instructor's assessment of the assignment.

SCHOLASTIC OFFENCES

Scholastic offences are taken seriously, and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

Statement on the use of plagiarism-checking software

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com).

ACADEMIC ADVISING

Your Home Faculty's Academic Advising Office will support or refer whenever you have an issue that is affecting your studies, including information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters. Do not hesitate to reach out to them if you are struggling and unsure where to go for help. Contact info for all Faculties is here:
https://registrar.uwo.ca/faculty_academic_counselling.html

MENTAL HEALTH SUPPORT

Students who are in emotional/mental distress should refer to Mental Health@Western (https://uwo.ca/health/) for a complete list of options about how to obtain help. Immediate help in the event of a crisis can be had by phoning 519.661.3030 (during class hours) or 519.433.2023 after class hours and on weekends (24/7 availability).

GENDER-BASED AND SEXUAL VIOLENCE

Western University is committed to reducing incidents of gender-based and sexual violence (GBSV) and providing compassionate support to anyone who is going through or has gone through these traumatic events. If you are experiencing or have experienced GBSV (either recently or in the past), you will find information about support services for survivors, including emergency contacts at the following website: https://www.uwo.ca/health/student_support/survivor_support/get-help.html. To connect with a case manager or set up an appointment, please contact support@uwo.ca.